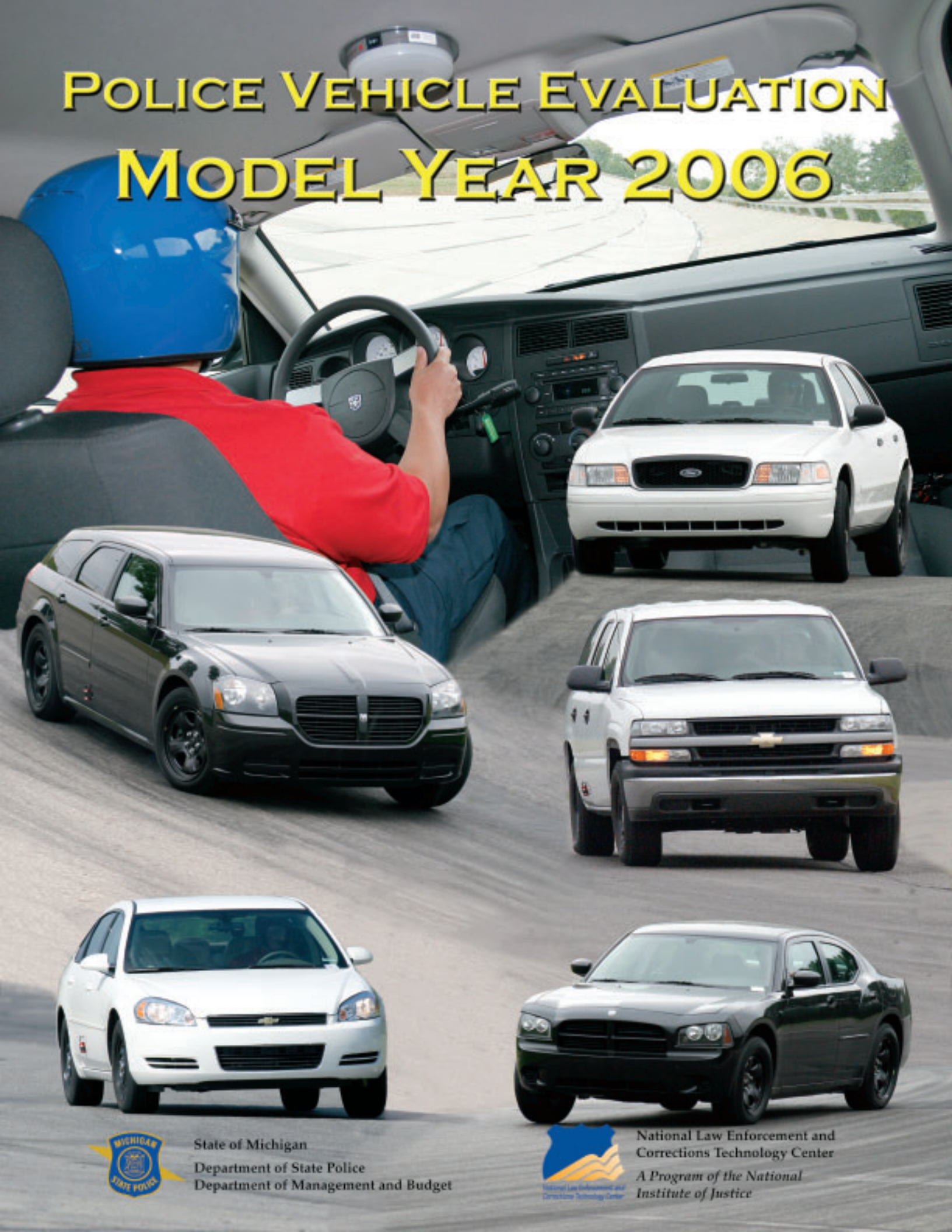
Police Vehicle Evaluation

Model Year 2006



State of Michigan

Department of State Police
Department of Management and Budget

National Law Enforcement and
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A Program of the National Institute of Justice

STATE OF MICHIGAN
Department of State Police
and
Department of Management and Budget

2006 Model Year
Police Vehicle
Evaluation Program

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Prepared by:
Ms. Gina Rosendall, Precision Driving Unit

Photographs by:
Mr. Raymond Holt, Media Production Unit

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PREFACE

The Michigan State Police Vehicle Test Team is pleased to announce the results of the 2006 model year Police Vehicle Evaluation. This year we tested five vehicles in the police category, five vehicles in the special services category and two in the non-published vehicle category. We appreciate your continued support and encouragement. The vehicles evaluated this year include the following:

POLICE CATEGORY

Ford Police Interceptor (3.27:1)	4.6L
Ford Police Interceptor (3.55:1)	4.6L
Chevrolet Impala 9C1	3.9L
Chevrolet Tahoe PPV 2WD E85	5.3L
Chevrolet Tahoe PPV 2WD	5.3L
Dodge Charger	3.5L
Dodge Charger	5.7L
Dodge Magnum	3.5L
Dodge Magnum	5.7L

SPECIAL SERVICE CATEGORY

Ford Explorer*	4.6L (2 Wheel Drive)
Ford Expedition*	5.4L 3V (2 Wheel Drive)
Chevrolet Tahoe*	5.3L (4 Wheel Drive)
Dodge Magnum*	3.5L

*Special Service Package vehicles are not suitable for high speed, pursuit or emergency driving.

GENERAL INFORMATION

All of the vehicles were tested with a clean roof (no overhead light or lightbar) and without "A" pillar mount spotlights. We believe this is the best way to ensure all of the cars are tested on an equal basis. Remember that once overhead lights, spotlights, radio antennas, sirens, and other emergency equipment are installed, overall performance may be somewhat lower than we report.

Each vehicle was tested with the tires that are available as original equipment on the production model. Specific tire information for each vehicle is available in the Vehicle Description portion of this report. All vehicles listed in this report were equipped with electronic speed limiters.

DaimlerChrysler Proving Grounds - Acceleration, Top Speed, & Braking Tests

During Saturday's Brake Testing the Chevrolet Impala did not make MSP's minimum deceleration qualification for braking. The following week we were contacted by Chevrolet. Chevrolet found a calibration error in the ABS software on the test vehicle. This error did not effect FMVSS requirements, but was corrected to achieve MSP requirements. 2006 Chevrolet Impala production vehicles now have the corrected calibration in the ABS software. MSP decided that it was important to provide law enforcement with the most accurate and timely information. The test team went back to the DCX Proving Grounds on October 7th and retested the Chevrolet Impala in the braking portion only. The data published in the Brake Testing section of the book is for the retest and is accurate for the software that Chevrolet will provide for the 2006 model.

Grattan Raceway - Vehicle Dynamics (High Speed Handling) Test

The Chevrolet 4WD Tahoe, Ford Explorer, Ford Expedition, and one of the Dodge Magnum's are "special service" vehicles and are not driven through the vehicle dynamics (high-speed handling) test. These vehicles are not engineered or recommended for high-speed emergency driving or pursuit applications.

We recommend you review the information contained in this report and then apply it to the needs of your agency. This report is not an endorsement of products, but a means of learning what's available for your officers so they can do their job effectively and safely. If anything in this report requires further explanation or clarification, please call or write.

Lt. David Halliday
Michigan State Police
Precision Driving Unit
7426 North Canal Road
Lansing, Michigan 48913

Phone: 517-322-1787 Fax: 517-322-0725 E-mail: hallidd@michigan.gov

ACKNOWLEGEMENTS

We would like to thank the following contributors. We are grateful for their support and encouragement toward our ultimate goal: a safe, successful testing program that benefits the law enforcement community nationwide and beyond.

Colonel Tadarial J. Sturdivant, Director, Michigan Department of State Police
Lt. Colonel Peter C. Munoz, Deputy Director, Field Services Bureau
Lt. Colonel Thomas J. Miller, Deputy Director, Administrative Services Bureau
Personnel from the Michigan Department of Management & Budget, Vehicle and Travel Services

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Mr. Terry Packer and personnel from DaimlerChrysler Proving Grounds
Mr. Sam Faasen and personnel from Grattan Raceway Park

Michigan State Police Volunteers – Ernie & Hazel Schutter, Denny Steendam, Austin & Reathel Waldron, Clayton Babcock, Al & Betty Burnett, James Mayo, and Roger Chittenden

The Michigan State Police Rockford Post for their assistance at Grattan Raceway.

Michigan State Police Ergonomic Evaluators –Tpr. Brian Keely, Tpr. Greg Galarneau, MC Officer Niki Brehm, Tpr. Ernie Felkers, Tpr. Scott Carlson, Tpr. Bennie Boyd, Tpr. Todd Price, Tpr. Carl Brice, Tpr. Paul Neal, Tpr. Brett Vogt

Special thanks to General Motors, Ford Motor Company, and DaimlerChrysler Motors vehicle manufacturers for their hard work in building and preparing the test cars. We are grateful for your dedication to law enforcement. Everyday law enforcement looks to these vehicles to do a list of duties varied and enduring.

Finally, thanks to all in the United States and Canada who represent law enforcement and purchasing agencies for your constant encouragement and support. We are proud to make a contribution to the law enforcement community.

Michigan State Police Vehicle Test Team:

Lt. David “Doc” Halliday
Sgt. Keith Wilson
Sgt. Denny Harris
Retired Sgt. Bob Ring
Sgt. Doug Schutter
Ms. Gina Rosendall
Sgt. Ron Gromak
Sgt. Jim Flegel
Sgt. Loren Lee
Mrs. Nicole Marsh
Sgt. Rick Stevens
Retired Sgt. Bill McFall
F/Lt. Howard Powers
Capt. Gene Hoekwater,
Retired Ofc. Rob Johnson

TEST EQUIPMENT

The following test equipment is utilized during the acceleration, top speed, braking, and vehicle dynamics portions of the evaluation program.

DATRON TECHNOLOGY, INC., 21654 Melrose Ave., Building 16, Southfield, Michigan 48075

DLS Smart Sensor – Optical non-contact speed and distance sensor

Shoei Helmets, 3002 Dow Ave., Suite 128, Tustin, CA 92780

Law Enforcement Helmet – Model RJ-Air LE

AMB i.t. US INC., 1631 Phoenix Blvd., Suite 11, College Park, GA 30349

AMB TranX extended loop decoder

Mains adapter 230 V AC/12 V DC

AMB TranX260 transponders

AMMCO TOOLS, Inc., 2100 Commonwealth Ave., North Chicago, IL 60064

Decelerometer, Model 7350

TEST VEHICLE DESCRIPTIONS AND PHOTOGRAPHS

Ford Police Interceptor

3.27:1

TEST VEHICLE DESCRIPTION

MAKE Ford	**MODEL** Police Interceptor	**SALES CODE NO.** P71	
ENGINE DISPLACEMENT	**CUBIC INCHES** 281	**LITERS** 4.6	
FUEL SYSTEM	Sequential Multiport Fuel Injection	**EXHAUST** Dual	
HORSEPOWER (SAENET)	250 @ 5000 RPM	**ALTERNATOR** 200	
TORQUE	297ft-lbs @ 4000 RPM	**BATTERY** 750 CCA	
COMPRESSION RATIO	9.4:1		
TRANSMISSION	**MODEL** 4R70W	**TYPE** 4-Speed Electronic Automatic	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	3.27		
STEERING	Power Rack and Pinion, variable ratio		
TURNING CIRCLE (CURB TO CURB)	40.3 ft.		
TIRE SIZE, LOAD & SPEED RATING	P235/55R17 98W Goodyear Eagle RS-A		
SUSPENSION TYPE (FRONT)	Independent SLA with ball joint & coil spring		
SUSPENSION TYPE (REAR)	4 bar link with Watts Linkage		
GROUND CLEARANCE, MINIMUM	5.6 in.	**LOCATION** Exhaust joint	
BRAKE SYSTEM	Power, dual front piston, single rear piston, 4 circuit and ABS		
BRAKES, FRONT	**TYPE** Vented disc	**SWEPT AREA** 273 sq. in.	
BRAKES, REAR	**TYPE** Vented disc	**SWEPT AREA** 176 sq. in.	
FUEL CAPACITY	**GALLONS** 19.0	**LITERS** 71.9	
GENERAL MEASUREMENTS	**WHEELBASE** 114.7 in.	**LENGTH** 212.0 in.	
	TEST WEIGHT 4148	**HEIGHT** 58.5 in.	
HEADROOM	**FRONT** 39.4 in.	**REAR** 38.0 in.	
LEGROOM	**FRONT** 42.5 in.	**REAR** 39.6 in.	
SHOULDER ROOM	**FRONT** 60.8 in.	**REAR** 60.3 in.	
HIPROOM	**FRONT** 57.1 in.	**REAR** 59.0 in.	
INTERIOR VOLUME	**FRONT** 58.2 cu. ft.	**REAR** 51.1 cu. ft.	
	COMB 109.3 cu. ft.	**TRUNK** 20.6 cu. ft.	
EPA MILEAGE EST. (MPG)	**CITY** 16 (15.6)	**HIGHWAY** 23	**COMBINED** 18

Ford Police Interceptor

3.55:1

TEST VEHICLE DESCRIPTION

MAKE Ford	**MODEL** Police Interceptor	**SALES CODE NO.** P71	
ENGINE DISPLACEMENT	**CUBIC INCHES** 281	**LITERS** 4.6	
FUEL SYSTEM	Sequential Multiport Fuel Injection	**EXHAUST** Dual	
HORSEPOWER (SAENET)	250 @ 5000 RPM	**ALTERNATOR** 200	
TORQUE	297 ft-lbs @ 4000 RPM	**BATTERY** 750 CCA	
COMPRESSION RATIO	9.4:1		
TRANSMISSION	**MODEL** 4R70W	**TYPE** 4-Speed Electronic Automatic	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	3.55		
STEERING	Power Rack and Pinion, variable ratio		
TURNING CIRCLE (CURB TO CURB)	40.3 ft.		
TIRE SIZE, LOAD & SPEED RATING	P235/55R17 98W Goodyear Eagle RS-A		
SUSPENSION TYPE (FRONT)	Independent SLA with ball joint & coil spring		
SUSPENSION TYPE (REAR)	4 bar link with Watts Linkage		
GROUND CLEARANCE, MINIMUM	5.6 in.	**LOCATION** Exhaust joint	
BRAKE SYSTEM	Power, dual front piston, single rear piston, 4 circuit and ABS		
BRAKES, FRONT	**TYPE** Vented disc	**SWEPT AREA** 273 sq. in.	
BRAKES, REAR	**TYPE** Vented disc	**SWEPT AREA** 176 sq. in.	
FUEL CAPACITY	**GALLONS** 19.0	**LITERS** 71.9	
GENERAL MEASUREMENTS	**WHEELBASE** 114.7 in.	**LENGTH** 212.0 in.	
	TEST WEIGHT 4132	**HEIGHT** 58.5 in.	
HEADROOM	**FRONT** 39.4 in.	**REAR** 38.0 in.	
LEGROOM	**FRONT** 42.5 in.	**REAR** 39.6 in.	
SHOULDER ROOM	**FRONT** 60.8 in.	**REAR** 60.3 in.	
HIPROOM	**FRONT** 57.1 in.	**REAR** 59.0 in.	
INTERIOR VOLUME	**FRONT** 58.2 cu. ft.	**REAR** 51.1 cu. ft.	
	COMB 109.3 cu. ft.	**TRUNK** 20.6 cu. ft.	
EPA MILEAGE EST. (MPG)	**CITY** 16 (15.6)	**HIGHWAY** 23	**COMBINED** 18

Chevrolet Impala 9C1

TEST VEHICLE DESCRIPTION

MAKE Chevrolet	**MODEL** Impala 9C1	**SALES CODE NO.** 1W519	
ENGINE DISPLACEMENT	**CUBIC INCHES** 231	**LITERS** 3.8	
FUEL SYSTEM	Sequential Port Fuel Injection	**EXHAUST** Single	
HORSEPOWER (SAENET)	240 @ 5200 RPM	**ALTERNATOR** 150 amp.	
TORQUE	245 ft-lbs @ 4800 RPM	**BATTERY** 750 CCA	
COMPRESSION RATIO	9.4:1		
TRANSMISSION	**MODEL** 4T65E	**TYPE** 4-Speed Automatic	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	3.29:1		
STEERING	Power Rack and Pinion		
TURNING CIRCLE (CURB TO CURB)	38.0 ft.		
TIRE SIZE, LOAD & SPEED RATING	P225/60R16 V-Rated Pirelli AL3		
SUSPENSION TYPE (FRONT)	Independent McPherson strut, coil springs & stabilizer bar		
SUSPENSION TYPE (REAR)	Independent Tri-Link coil spring over strut & stabilizer bar		
GROUND CLEARANCE, MINIMUM	7.1 in.	**LOCATION** Engine cradle	
BRAKE SYSTEM	Power, dual hydraulic, anti lock		
BRAKES, FRONT	**TYPE** Vented disc	**SWEPT AREA** 235.4 sq. in.	
BRAKES, REAR	**TYPE** Solid disc	**SWEPT AREA** 160.3 sq. in.	
FUEL CAPACITY	**GALLONS** 17.0	**LITERS** 64.3	
GENERAL MEASUREMENTS	**WHEELBASE** 110.5 in.	**LENGTH** 200.4 in.	
	TEST WEIGHT 3725	**HEIGHT** 58.7 in.	
HEADROOM	**FRONT** 39.4 in.	**REAR** 37.8 in.	
LEGROOM	**FRONT** 42.3 in.	**REAR** 37.6 in.	
SHOULDER ROOM	**FRONT** 58.7 in.	**REAR** 58.9 in.	
HIPROOM	**FRONT** 56.4 in.	**REAR** 57.2 in.	
INTERIOR VOLUME	**FRONT** 56.5 cu. ft.	**REAR** 55.7 cu. ft.	
	COMB 104.8 cu. ft.	**TRUNK** 18.6 cu. ft. w/ compact spare	
EPA MILEAGE EST. (MPG)	**CITY** 19 (18.8)	**HIGHWAY** 25	**COMBINED** 21

Chevrolet Tahoe PPV

2WD E85

VEHICLE TEST DESCRIPTION

MAKE Chevrolet	**MODEL** Tahoe PPV – 2WD	**SALES CODE NO.** CC15706	
ENGINE DISPLACEMENT	**CUBIC INCHES** 327	**LITERS** 5.3	
FUEL SYSTEM	SPFI – E85 Ethanol	**EXHAUST** Single	
HORSEPOWER (SAENET)	285 @ 5200 RPM	**ALTERNATOR** 160	
TORQUE	325 ft-lbs @ 4000 RPM	**BATTERY** 770 CCA	
COMPRESSION RATIO	9.5:1		
TRANSMISSION	**MODEL** 4L60E	**TYPE** 4 – Speed Automatic Overdrive	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	3.73		
STEERING	Power – recirculating ball		
TURNING CIRCLE (CURB TO CURB)	38.3 ft.		
TIRE SIZE, LOAD & SPEED RATING	P255/70/R16 General Ameritrac Police Radial		
SUSPENSION TYPE (FRONT)	Independent, single lower arm with torsion bar		
SUSPENSION TYPE (REAR)	Multi-link with coil springs		
GROUND CLEARANCE, MINIMUM	8.75 in.	**LOCATION** Front Cross Member	
BRAKE SYSTEM	Hydro-boost, power, anti-lock		
BRAKES, FRONT	**TYPE** Disc	**SWEPT AREA** 213 sq. in.	
BRAKES, REAR	**TYPE** Disc	**SWEPT AREA** 113 sq. in.	
FUEL CAPACITY	**GALLONS** 26.0	**LITERS** 98.4	
GENERAL MEASUREMENTS	**WHEELBASE** 116 in.	**LENGTH** 198.9 in.	
	TEST WEIGHT 5072	**HEIGHT** 72.0 in. w/o luggage rack	
HEADROOM	**FRONT** 40.7 in.	**REAR** 39.4 in.	
LEGROOM	**FRONT** 41.3 in.	**REAR** 38.6 in.	
SHOULDER ROOM	**FRONT** 65.2 in.	**REAR** 65.1 in.	
HIPROOM	**FRONT** 61.4 in.	**REAR** 61.3 in.	
INTERIOR VOLUME ***MAX. CARGO IS W/REAR SEATS FOLDED DOWN**	**FRONT** 94.3 cu. ft.	**REAR** 57.3 cu. ft.	
	COMB 151.6 cu. ft.	***MAX. CARGO** 168.2 cu. ft.	
EPA MILEAGE EST. (MPG)	**CITY** 11 (11.0)	**HIGHWAY** 14	**COMBINED** 12

Chevrolet Tahoe PPV

2WD

TEST VEHICLE DESCRIPTION

MAKE Chevrolet	**MODEL** Tahoe PPV – 2WD		**SALES CODE NO.** CC15706		
ENGINE DISPLACEMENT	**CUBIC INCHES** 327		**LITERS** 5.3		
FUEL SYSTEM	Sequential Port Fuel Injection		**EXHAUST** Single		
HORSEPOWER (SAENET)	285 @ 5200 RPM		**ALTERNATOR** 160		
TORQUE	325 ft-lbs @ 4000 RPM		**BATTERY** 770 CCA		
COMPRESSION RATIO	9.5:1				
TRANSMISSION	**MODEL** 4L60E	**TYPE** 4 – Speed Automatic Overdrive			
	LOCKUP TORQUE CONVERTER? Yes				
	OVERDRIVE? Yes				
AXLE RATIO	3.73				
STEERING	Power – Recirculating ball				
TURNING CIRCLE (CURB TO CURB)	38.3 ft.				
TIRE SIZE, LOAD & SPEED RATING	P255/70/R16 General Ameritrac Police Radial				
SUSPENSION TYPE (FRONT)	Independent, single lower arm with torsion bar				
SUSPENSION TYPE (REAR)	Multi-link with coil springs				
GROUND CLEARANCE, MINIMUM	8.75 in.	**LOCATION** Front Cross Member			
BRAKE SYSTEM	Hydro-boost, power, anti-lock				
BRAKES, FRONT	**TYPE** Disc		**SWEPT AREA** 213 sq. in.		
BRAKES, REAR	**TYPE** Disc		**SWEPT AREA** 133 sq. in.		
FUEL CAPACITY	**GALLONS** 26.0		**LITERS** 98.4		
GENERAL MEASUREMENTS	**WHEELBASE** 116 in.		**LENGTH** 198.9 in.		
	TEST WEIGHT 5079		**HEIGHT** 72.0 in. w/o luggage rack		
HEADROOM	**FRONT** 40.7 in.		**REAR** 39.4 in.		
LEGROOM	**FRONT** 41.3 in.		**REAR** 38.6 in.		
SHOULDER ROOM	**FRONT** 65.2 in.		**REAR** 65.1 in.		
HIPROOM	**FRONT** 61.4 in.		**REAR** 61.3 in.		
INTERIOR VOLUME ***MAX. CARGO IS W/REAR SEATS FOLDED DOWN**	**FRONT** 94.3 cu. ft.		**REAR** 57.3 cu. ft.		
	COMB 151.6 cu. ft.		***MAX. CARGO** 168.2 cu. ft.		
EPA MILEAGE EST. (MPG)	**CITY** 15 (14.6)	**HIGHWAY** 18	**COMBINED** 16		

Dodge Charger 3.5L

MAKE Dodge	**MODEL** Charger		**SALES CODE NO.** 27A
ENGINE DISPLACEMENT	**CUBIC INCHES** 214		**LITERS** 3.5
FUEL SYSTEM	Sequential Port Fuel Injection		**EXHAUST** Single
HORSEPOWER (SAENET)	250 @ 6400		**ALTERNATOR** 160 Amp
TORQUE	250 lbs-ft @ 3800		**BATTERY** 800 CCA
COMPRESSION RATIO	10.0:1		
TRANSMISSION	**MODEL** A580	**TYPE** 5 Speed Electronic Automatic	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	2.87:1		
STEERING	Power Rack & Pinion		
TURNING CIRCLE (CURB TO CURB)	38.9		
TIRE SIZE, LOAD & SPEED RATING	P225/60 R 18 99V Continental ProContact		
SUSPENSION TYPE (FRONT)	Independent High Arm SLA with Dual Ball Joint Lower, Coil Spring, Sway Bar		
SUSPENSION TYPE (REAR)	Independent Multi-Link, Coil Spring, Sway Bar		
GROUND CLEARANCE, MINIMUM	5.2 in.	**LOCATION** Fascia Belly Pan	
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, Anti-Lock		
BRAKES, FRONT	**TYPE** Vented Disc		**SWEPT AREA** 282 sq. in.
BRAKES, REAR	**TYPE** Vented Disc		**SWEPT AREA** 242 sq. in.
FUEL CAPACITY	**GALLONS** 19		**LITERS** 72
GENERAL MEASUREMENTS	**WHEELBASE** 120 in.		**LENGTH** 200.1 in.
	TEST WEIGHT 3917		**HEIGHT** 58.2 in.
HEADROOM	**FRONT** 38.7 in.		**REAR** 36.2 in.
LEGROOM	**FRONT** 41.8 in.		**REAR** 40.2 in.
SHOULDER ROOM	**FRONT** 59.3 in.		**REAR** 57.6 in.
HIPROOM	**FRONT** 56.2 in.		**REAR** 55.5 in.
INTERIOR VOLUME	**FRONT** 55.5 cu. ft.		**REAR** 48.5 cu. ft.
	COMB 104 cu. ft.		**TRUNK** 16.2 cu. ft.
EPA MILEAGE EST. (MPG)	**CITY** 19 (18.8)	**HIGHWAY** 27	**COMBINED** 22

Dodge Charger 5.7L

MAKE Dodge	**MODEL** Charger		**SALES CODE NO.** 29A
ENGINE DISPLACEMENT	**CUBIC INCHES** 345		**LITERS** 5.7
FUEL SYSTEM	Sequential Port Fuel Injection		**EXHAUST** Dual
HORSEPOWER (SAENET)	340 @ 5000		**ALTERNATOR** 160 Amp
TORQUE	390 lbs-ft @ 4000		**BATTERY** 800 CCA
COMPRESSION RATIO	9.7:1		
TRANSMISSION	**MODEL** A580	**TYPE** 5 Speed Electronic Automatic	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	2.82:1		
STEERING	Power Rack & Pinion		
TURNING CIRCLE (CURB TO CURB)	38.9		
TIRE SIZE, LOAD & SPEED RATING	P225/60 R 18 99V Continental ProContact		
SUSPENSION TYPE (FRONT)	Independent High Arm SLA with Dual Ball Joint Lower, Coil Spring, Sway Bar		
SUSPENSION TYPE (REAR)	Independent Multi-Link, Coil Spring, Sway Bar		
GROUND CLEARANCE, MINIMUM	5.2 in.	**LOCATION** Fascia Belly Pan	
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, Anti-Lock		
BRAKES, FRONT	**TYPE** Vented Disc	**SWEPT AREA** 282 sq. in.	
BRAKES, REAR	**TYPE** Vented Disc	**SWEPT AREA** 242 sq. in.	
FUEL CAPACITY	**GALLONS** 19	**LITERS** 72	
GENERAL MEASUREMENTS	**WHEELBASE** 120 in.	**LENGTH** 200.1 in.	
	TEST WEIGHT 4106	**HEIGHT** 58.2 in.	
HEADROOM	**FRONT** 38.7 in.	**REAR** 36.2 in.	
LEGROOM	**FRONT** 41.8 in.	**REAR** 40.2 in.	
SHOULDER ROOM	**FRONT** 59.3 in.	**REAR** 57.6 in.	
HIPROOM	**FRONT** 56.2 in.	**REAR** 55.5 in.	
INTERIOR VOLUME	**FRONT** 55.5 cu. ft.	**REAR** 48.5 cu. ft.	
	COMB 104 cu. ft.	**TRUNK** 16.2 cu. ft.	
EPA MILEAGE EST. (MPG)	**CITY** 17 (16.9)	**HIGHWAY** 25	**COMBINED** 20

Dodge Magnum 3.5L

TEST VEHICLE DESCRIPTION

MAKE Dodge	**MODEL** Magnum		**SALES CODE NO.** 27A		
ENGINE DISPLACEMENT	**CUBIC INCHES** 214		**LITERS** 3.5		
FUEL SYSTEM	Sequential Port Fuel Injection		**EXHAUST** Single		
HORSEPOWER (SAENET)	250 @ 6400		**ALTERNATOR** 160 amp.		
TORQUE	250 lbs-ft @ 3800		**BATTERY** 800 CCA		
COMPRESSION RATIO	10.0:1				
TRANSMISSION	**MODEL** A580	**TYPE** 5 Speed Electronic Automatic			
	LOCKUP TORQUE CONVERTER? Yes				
	OVERDRIVE? Yes				
AXLE RATIO	2.87:1				
STEERING	Power Rack & Pinion				
TURNING CIRCLE (CURB TO CURB)	38.9				
TIRE SIZE, LOAD & SPEED RATING	P225/60/R18 Continental ProContact				
SUSPENSION TYPE (FRONT)	Independent High Arm SLA with Dual Ball Joint Lower, Coil Spring, Sway Bar				
SUSPENSION TYPE (REAR)	Independent Multi-Link, Coil Spring, Sway Bar				
GROUND CLEARANCE, MINIMUM	5.2 in.	**LOCATION** Fascia Belly Pan			
BRAKE SYSTEM	Power, Single Piston Front/Single Piston Rear, Anti-Lock				
BRAKES, FRONT	**TYPE** Vented Disc		**SWEPT AREA** 282 sq. in.		
BRAKES, REAR	**TYPE** Vented Disc		**SWEPT AREA** 242 sq. in.		
FUEL CAPACITY	**GALLONS** 19		**LITERS** 72		
GENERAL MEASUREMENTS	**WHEELBASE** 120 in.		**LENGTH** 197.7 in.		
	TEST WEIGHT 4023		**HEIGHT** 58.3 in.		
HEADROOM	**FRONT** 38.7 in.		**REAR** 38.1 in.		
LEGROOM	**FRONT** 41.8 in.		**REAR** 40.2 in.		
SHOULDER ROOM	**FRONT** 58.7 in.		**REAR** 57.6 in.		
HIPROOM	**FRONT** 56.2 in.		**REAR** 56.1 in.		
INTERIOR VOLUME	**FRONT** 55.0 cu. ft.		**REAR** 51.0 cu. ft.		
	COMB 106.0 cu. ft.		**TRUNK** 27.3 cu. ft.		
EPA MILEAGE EST. (MPG)	**CITY** 19 (18.8)	**HIGHWAY** 27	**COMBINED** 22		

Dodge Magnum 5.7L

TEST VEHICLE DESCRIPTION

MAKE Dodge	**MODEL** Magnum		**SALES CODE NO.** 29A		
ENGINE DISPLACEMENT	**CUBIC INCHES** 345		**LITERS** 5.7		
FUEL SYSTEM	Sequential Port Fuel Injection		**EXHAUST** Dual		
HORSEPOWER (SAENET)	340 @ 5000		**ALTERNATOR** 160 amp.		
TORQUE	390 lbs-ft @ 4000		**BATTERY** 800 CCA		
COMPRESSION RATIO	9.7:1				
TRANSMISSION	**MODEL** A580	**TYPE** 5 Speed Electronic Automatic			
	LOCKUP TORQUE CONVERTER? Yes				
	OVERDRIVE? Yes				
AXLE RATIO	2.82:1				
STEERING	Power Rack & Pinion				
TURNING CIRCLE (CURB TO CURB)	38.9				
TIRE SIZE, LOAD & SPEED RATING	P225/60/R18 99V Continental ProContact				
SUSPENSION TYPE (FRONT)	Independent High Arm SLA with Dual Ball Joint Lower, Coil Spring, Sway Bar				
SUSPENSION TYPE (REAR)	Independent Multi-Link, Coil Spring, Sway Bar				
GROUND CLEARANCE, MINIMUM	5.2 in.	**LOCATION** Fascia Belly Pan			
BRAKE SYSTEM	Power, Single Piston Front/Single Piston Rear, Anti-Lock				
BRAKES, FRONT	**TYPE** Vented Disc		**SWEPT AREA** 282 sq. in.		
BRAKES, REAR	**TYPE** Vented Disc		**SWEPT AREA** 242 sq. in.		
FUEL CAPACITY	**GALLONS** 19		**LITERS** 72		
GENERAL MEASUREMENTS	**WHEELBASE** 120 in.		**LENGTH** 197.7 in.		
	TEST WEIGHT 4231		**HEIGHT** 58.3 in.		
HEADROOM	**FRONT** 38.7 in.		**REAR** 38.1 in.		
LEGROOM	**FRONT** 41.8 in.		**REAR** 40.2 in.		
SHOULDER ROOM	**FRONT** 58.7 in.		**REAR** 57.6 in.		
HIPROOM	**FRONT** 56.2 in.		**REAR** 56.1 in.		
INTERIOR VOLUME	**FRONT** 55.0 cu. ft.		**REAR** 51.0 cu. ft.		
	COMB 106.0 cu. ft.		**TRUNK** 27.3 cu. ft.		
EPA MILEAGE EST. (MPG)	**CITY** 17 (16.9)	**HIGHWAY** 25		**COMBINED** 20	

TEST VEHICLE DESCRIPTION SUMMARY

	Ford Police Interceptor 3.27	Chevrolet Impala 9C1	Dodge Charger 3.5L
ENGINE DISPLACEMENT – CU. IN.	281	231	214
ENGINE DISPLACEMENT – LITERS	4.6	3.8	3.5
ENGINE FUEL SYSTEM	SPFI	SPFI	SPFI
HORSEPOWER (SAE NET)	250	240	250
TORQUE (FT. LBS.)	297	245	250
COMPRESSION RATIO	9.4:1	9.4:1	10.0:1
AXLE RATIO	3.27	3.29:1	2.87:1
TURNING CIRCLE – FT. CURB TO CURB	40.3	38.0	38.9
TRANSMISSION	4 Speed elec. auto	4 Speed auto	5 Speed elec. auto
TRANSMISSION MODEL NUMBER	4R70W	4T65E	A580
LOCKUP TORQUE CONVERTER	Yes	Yes	Yes
TRANSMISSION OVERDRIVE	Yes	Yes	Yes
TIRE SIZE	P235/55R	P225/60R	P225/60R
WHEEL RIM SIZE – INCHES	17	16	18
GROUND CLEARANCE – INCHES	5.6	7.1	5.2
BRAKE SYSTEM	Power, ABS	Power, ABS	Power, ABS
BRAKES – FRONT TYPE	Vented Disc	Vented Disc	Vented Disc
BRAKES – REAR TYPE	Vented Disc	Solid Disc	Vented Disc
FUEL CAPACITY – GALLONS	19	17	19
FUEL CAPACITY – LITERS	71.9	64.3	72
OVERALL LENGTH – INCHES	212.0	200.4	200.1
OVERALL HEIGHT – INCHES	58.5	58.7	58.2
TEST WEIGHT – LBS.	4148	3725	3917
WHEELBASE – INCHES	114.7	110.5	120
HEADROOM FRONT – INCHES	39.4	39.4	38.7
HEADROOM REAR – INCHES	38.0	37.8	36.2
LEGROOM FRONT – INCHES	42.5	42.3	41.8
LEGROOM REAR – INCHES	39.6	37.6	40.2
SHOULDER ROOM FRONT – INCHES	60.8	58.7	59.3
SHOULDER ROOM REAR – INCHES	60.3	58.9	57.6
HIPROOM FRONT – INCHES	57.1	56.4	56.2
HIPROOM REAR – INCHES	59.0	57.2	55.5
INTERIOR VOLUME FRONT – CU. FT.	58.2	56.5	55.5
INTERIOR VOLUME REAR – CU. FT.	51.1	55.7	48.5
INTERIOR VOLUME COMB. – CU. FT.	109.3	104.8	104
TRUNK VOLUME – CU. FT.	20.6	18.6	16.2
EPA MILEAGE – CITY – MPG	16	19	19
EPA MILEAGE – HIGHWAY – MPG	23	25	27
EPA MILEAGE – COMBINED – MPG	18	21	22

TEST VEHICLE DESCRIPTION SUMMARY

	Dodge Charger 5.7L	Dodge Magnum 3.5L	Ford Police Interceptor 3.55
ENGINE DISPLACEMENT – CU. IN.	345	214	281
ENGINE DISPLACEMENT – LITERS	5.7	3.5	4.6
ENGINE FUEL SYSTEM	SPFI	SPFI	SPFI
HORSEPOWER (SAE NET)	340	250	250
TORQUE (FT. LBS.)	390	250	297
COMPRESSION RATIO	9.7:1	10.0:1	9.4:1
AXLE RATIO	2.82:1	2.87:1	3.55
TURNING CIRCLE – FT. CURB TO CURB	38.9	38.9	40.3
TRANSMISSION	5 Speed elec. auto	5 Speed elec. auto	4 Speed elec. auto
TRANSMISSION MODEL NUMBER	A580	A580	4R70W
LOCKUP TORQUE CONVERTER	Yes	Yes	Yes
TRANSMISSION OVERDRIVE	Yes	Yes	Yes
TIRE SIZE	P225/60	P225/60	P235/55R
WHEEL RIM SIZE – INCHES	18	18	17
GROUND CLEARANCE – INCHES	5.2	5.2	5.6
BRAKE SYSTEM	Power, ABS	Power, ABS	Power, ABS
BRAKES – FRONT TYPE	Vented Disc	Vented Disc	Vented Disc
BRAKES – REAR TYPE	Vented Disc	Vented Disc	Vented Disc
FUEL CAPACITY – GALLONS	19	19	19
FUEL CAPACITY – LITERS	72	72	71.9
OVERALL LENGTH – INCHES	200.1	197.7	212.0
OVERALL HEIGHT – INCHES	58.2	58.3	58.5
TEST WEIGHT – LBS.	4106	4023	4132
WHEELBASE – INCHES	120	120	114.7
HEADROOM FRONT – INCHES	38.7	38.7	39.4
HEADROOM REAR – INCHES	36.2	38.1	38.0
LEGROOM FRONT – INCHES	41.8	41.8	42.5
LEGROOM REAR – INCHES	40.2	40.2	39.6
SHOULDER ROOM FRONT – INCHES	59.3	58.7	60.8
SHOULDER ROOM REAR – INCHES	57.6	57.6	60.3
HIPROOM FRONT – INCHES	56.2	56.2	57.1
HIPROOM REAR – INCHES	55.5	56.1	59.0
INTERIOR VOLUME FRONT – CU. FT.	55.5	55.0	58.2
INTERIOR VOLUME REAR – CU. FT.	48.5	51.0	51.1
INTERIOR VOLUME COMB. – CU. FT.	104	106.0	109.3
TRUNK VOLUME – CU. FT.	16.2	27.3	20.6
EPA MILEAGE – CITY – MPG	17	19	16
EPA MILEAGE – HIGHWAY – MPG	25	27	23
EPA MILEAGE – COMBINED – MPG	20	22	18

TEST VEHICLE DESCRIPTION SUMMARY

	Dodge Magnum 5.7L	Chevrolet Tahoe PPV E85	Chevrolet Tahoe PPV
ENGINE DISPLACEMENT – CU. IN.	345	327	327
ENGINE DISPLACEMENT – LITERS	5.7	5.3	5.3
ENGINE FUEL SYSTEM	SPFI	SPFI – E85 Ethanol	SPFI
HORSEPOWER (SAE NET)	340	285	285
TORQUE (FT. LBS.)	390	325	325
COMPRESSION RATIO	9.7:1	9.5:1	9.5:1
AXLE RATIO	2.82:1	3.73	3.73
TURNING CIRCLE – FT. CURB TO CURB	38.9	38.3	38.3
TRANSMISSION	5 Speed elec. auto	4-Speed Automatic Overdrive	4-Speed Automatic Overdrive
TRANSMISSION MODEL NUMBER	A580	4L60E	4L60E
LOCKUP TORQUE CONVERTER	Yes	Yes	Yes
TRANSMISSION OVERDRIVE	Yes	Yes	Yes
TIRE SIZE	P225/60	P255/70R	P255/70R
WHEEL RIM SIZE – INCHES	18	16	16
GROUND CLEARANCE – INCHES	5.2	8.75	8.75
BRAKE SYSTEM	Power, ABS	Power, ABS	Power, ABS
BRAKES – FRONT TYPE	Vented Disc	Disc	Disc
BRAKES – REAR TYPE	Vented Disc	Disc	Disc
FUEL CAPACITY – GALLONS	19	26	26
FUEL CAPACITY – LITERS	72	98.4	98.4
OVERALL LENGTH – INCHES	197.7	198.9	198.9
OVERALL HEIGHT – INCHES	58.3	72.0 w/o luggage rack	72.0 w/o luggage rack
TEST WEIGHT – LBS.	4231	5072	5079
WHEELBASE – INCHES	120	116	116
HEADROOM FRONT – INCHES	38.7	40.7	40.7
HEADROOM REAR – INCHES	38.1	39.4	39.4
LEGROOM FRONT – INCHES	41.8	41.3	41.3
LEGROOM REAR – INCHES	40.2	38.6	38.6
SHOULDER ROOM FRONT – INCHES	58.7	65.2	65.2
SHOULDER ROOM REAR – INCHES	57.6	65.1	65.1
HIPROOM FRONT – INCHES	56.2	61.4	61.4
HIPROOM REAR – INCHES	56.1	61.3	61.3
INTERIOR VOLUME FRONT – CU. FT.	55.0	94.3	94.3
INTERIOR VOLUME REAR – CU. FT.	51.0	57.3	57.3
INTERIOR VOLUME COMB. – CU. FT.	106.0	151.6	151.6
MAXIMUM CARGO	27.3	168.2	168.2
EPA MILEAGE – CITY – MPG	17	11	15
EPA MILEAGE – HIGHWAY – MPG	25	14	18
EPA MILEAGE – COMBINED – MPG	20	12	16

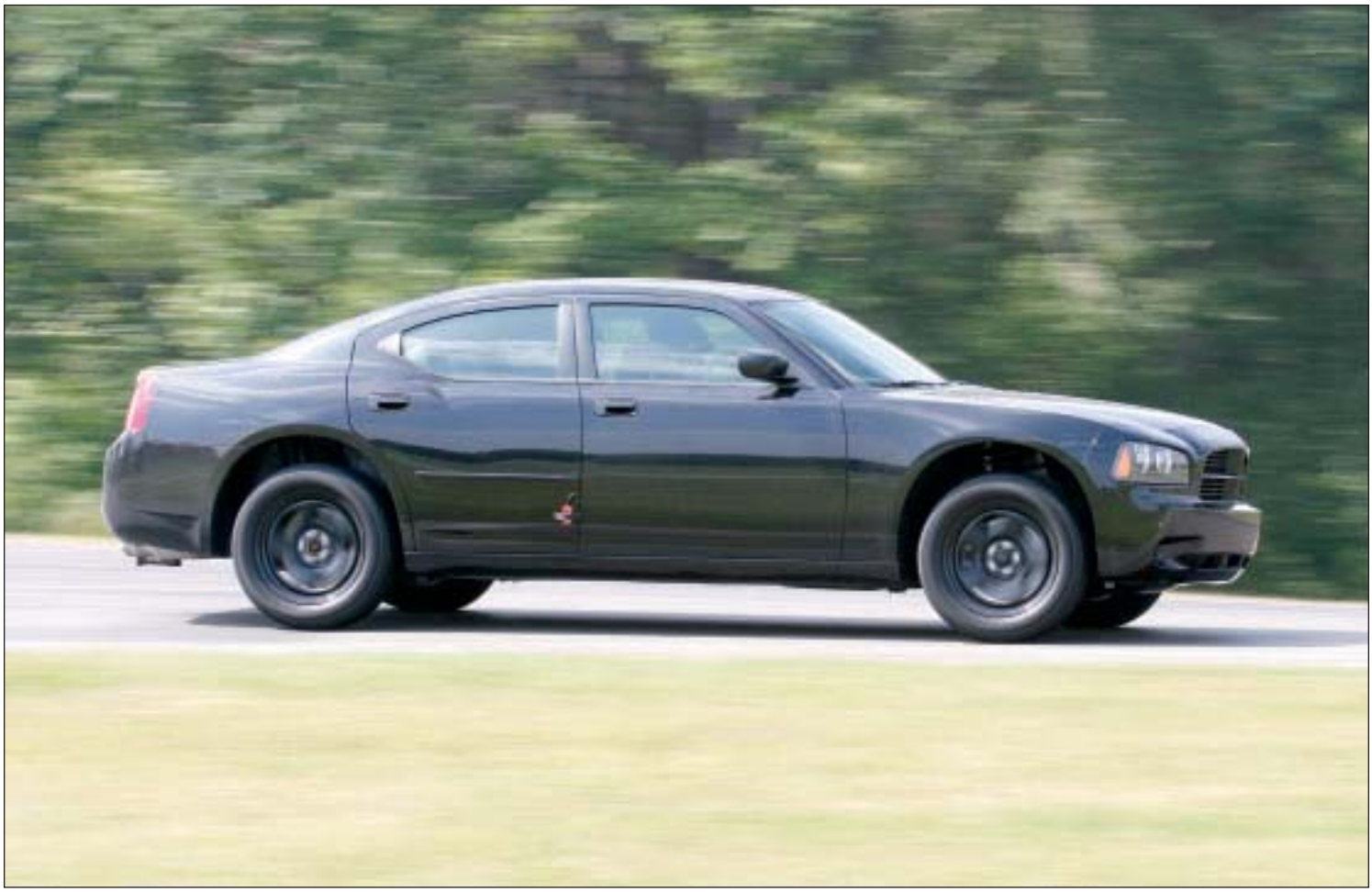
VEHICLE DYNAMICS TESTING

TEST OBJECTIVE

Determine each vehicle's high-speed pursuit or emergency handling characteristics and performance in comparison to the other vehicles in the test group. The course used is a 2-mile road-racing type configuration, containing hills, curves, and corners. The course simulates actual conditions encountered in pursuit or emergency driving situations in the field, with the exception of other traffic. The evaluation will be a true test of the success or failure of the vehicle manufacturers to offer vehicles that provide the optimum balance between handling (suspension components), acceleration (usable horsepower), and braking characteristics.

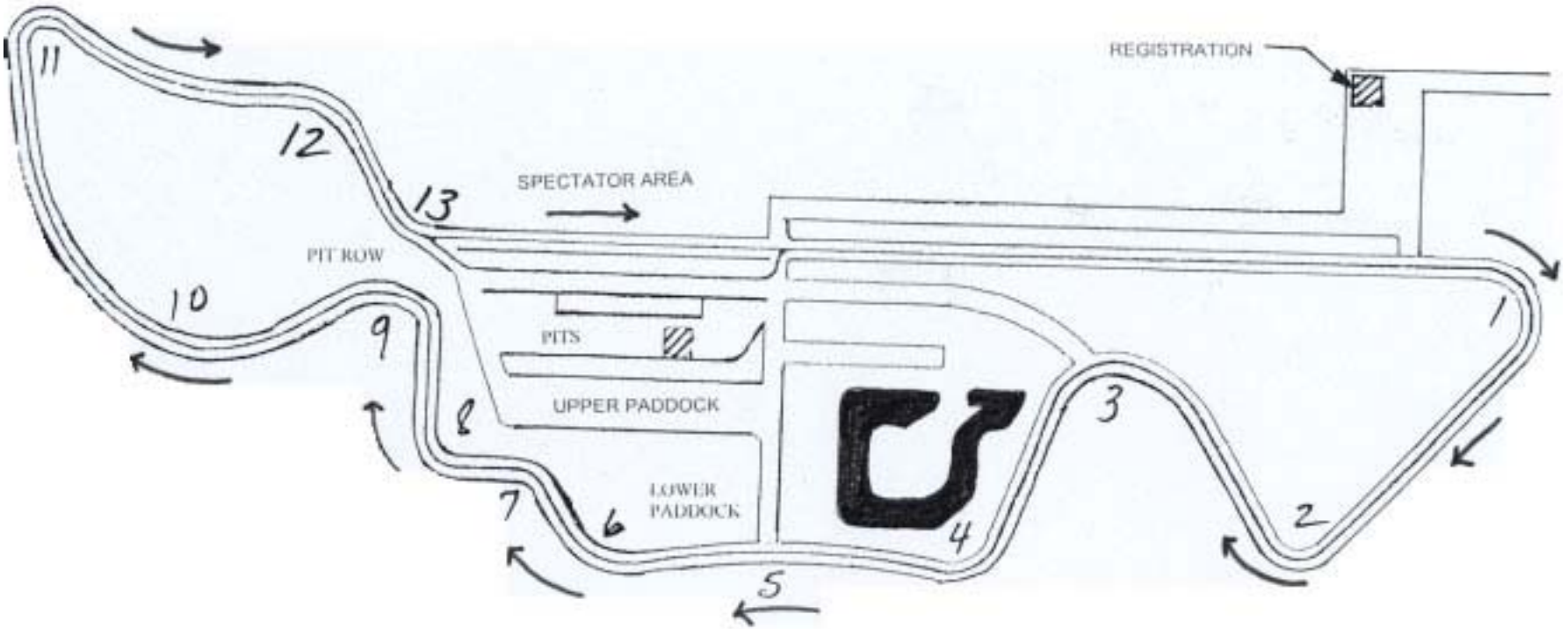
TEST METHODOLOGY

All vehicles will be driven over the course a total of 32 timed laps, using four separate drivers, each driving an 8 lap series. The final score for the vehicle will be the combined average (from the 4 drivers) of the 5 fastest laps for each driver during the 8 lap series.



Grattan Raceway Park

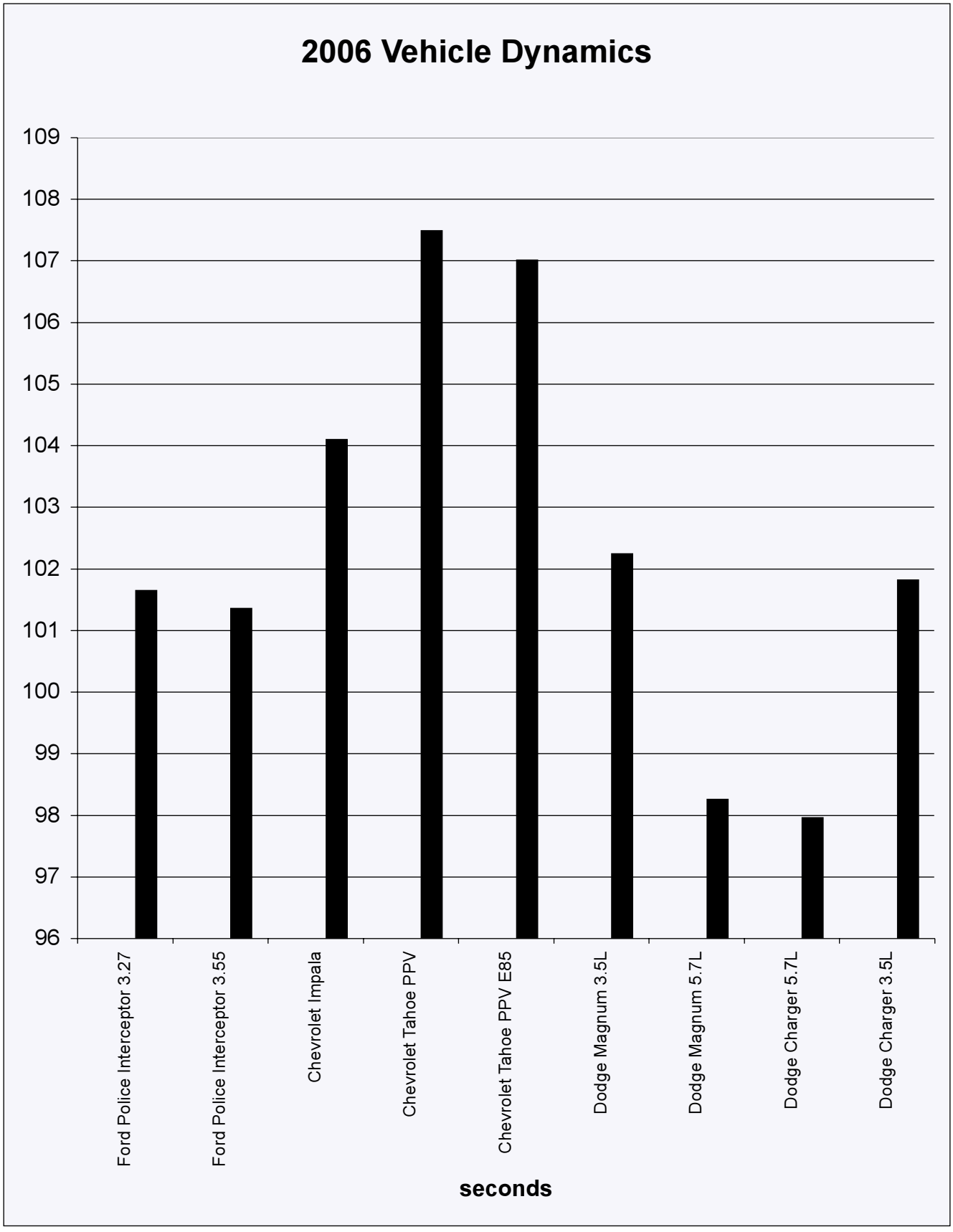
7201 Lessiter
Belding, Michigan 48809



Arrows indicate Michigan State Police Road Test Course and Direction of Travel.

VEHICLE DYNAMICS TESTING

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
Ford Police Interceptor 3:27 SPFI	GROMAK	01:40.50	01:40.50	01:40.60	01:40.60	01:40.70	01:40.58
	STEVENS	01:43.10	01:43.30	01:43.50	01:43.50	01:43.60	01:43.40
	SCHUTTER	01:41.00	01:41.20	01:41.50	01:41.60	01:41.70	01:41.40
	FLEGEL	01:41.10	01:41.20	01:41.20	01:41.30	01:41.40	01:41.24
Overall Average							**01:41.65**
Ford Police Interceptor 3:55 SPFI	GROMAK	01:40.30	01:40.50	01:40.60	01:40.60	01:40.70	01:40.54
	STEVENS	01:42.30	01:42.40	01:42.40	01:42.50	01:42.70	01:42.46
	SCHUTTER	01:41.50	01:41.80	01:41.90	01:42.00	01:42.00	01:41.84
	FLEGEL	01:40.50	01:40.50	01:40.60	01:40.70	01:40.70	01:40.60
Overall Average							**01:41.36**
Chevrolet Impala 9C1 3.9L SPFI	GROMAK	01:42.70	01:42.90	01:43.00	01:43.00	01:43.10	01:42.94
	STEVENS	01:45.30	01:45.50	01:45.60	01:45.60	01:45.80	01:45.56
	SCHUTTER	01:43.70	01:43.80	01:43.90	01:44.00	01:44.10	01:43.90
	FLEGEL	01:43.70	01:44.00	01:44.10	01:44.10	01:44.20	01:44.02
Overall Average							**01:44.10**
Chevrolet Tahoe PPV 2WD	GROMAK	01:46.70	01:46.70	01:47.00	01:47.00	01:47.20	01:46.92
	STEVENS	01:47.70	01:47.70	01:47.80	01:48.10	01:48.70	01:48.00
	SCHUTTER	01:48.00	01:48.00	01:48.10	01:48.20	01:48.30	01:48.12
	FLEGEL	01:46.50	01:46.60	01:46.80	01:47.20	01:47.50	01:46.92
Overall Average							**01:47.49**
Chevrolet Tahoe PPV 2WD E85	GROMAK	01:46.00	01:46.50	01:46.60	01:46.70	01:46.90	01:46.54
	STEVENS	01:47.20	01:47.20	01:47.30	01:47.30	01:47.60	01:47.32
	SCHUTTER	01:47.00	01:47.30	01:47.30	01:47.40	01:47.50	01:47.30
	FLEGEL	01:46.30	01:46.40	01:47.00	01:47.10	01:47.60	01:46.88
Overall Average							**01:47.01**
Dodge Magnum 3.5L SPFI	GROMAK	01:41.20	01:41.60	01:41.60	01:41.70	01:41.70	01:41.56
	STEVENS	01:43.10	01:43.40	01:43.60	01:43.70	01:43.80	01:43.52
	SCHUTTER	01:41.90	01:42.30	01:42.40	01:42.50	01:42.50	01:42.32
	FLEGEL	01:41.20	01:41.50	01:41.50	01:41.70	01:41.90	01:41.56
Overall Average							**01:42.24**
Dodge Magnum 5.7L SPFI	GROMAK	01:37.50	01:37.70	01:37.70	01:37.90	01:37.90	01:37.74
	STEVENS	01:39.00	01:39.00	01:39.50	01:39.50	01:39.90	01:39.38
	SCHUTTER	01:37.10	01:37.20	01:37.20	01:37.60	01:37.60	01:37.34
	FLEGEL	01:38.30	01:38.50	01:38.60	01:38.70	01:38.80	01:38.58
Overall Average							**01:38.26**
Dodge Charger 5.7L SPFI	GROMAK	01:37.90	01:37.90	01:38.00	01:38.20	01:38.40	01:38.08
	STEVENS	01:38.20	01:38.60	01:38.70	01:38.90	01:39.10	01:38.70
	SCHUTTER	01:37.40	01:37.50	01:37.60	01:37.70	01:37.80	01:37.60
	FLEGEL	01:37.30	01:37.30	01:37.30	01:37.70	01:37.80	01:37.48
Overall Average							**01:37.96**
Dodge Charger 3.5L SPFI	GROMAK	01:41.00	01:41.30	01:41.30	01:41.40	01:41.40	01:41.28
	STEVENS	01:42.50	01:42.50	01:42.60	01:42.70	01:42.70	01:42.60
	SCHUTTER	01:41.40	01:41.60	01:41.60	01:41.70	01:41.90	01:41.64
	FLEGEL	01:41.20	01:41.70	01:41.80	01:41.90	01:42.10	01:41.74
Overall Average							**01:41.82**


2006 Vehicle Dynamics
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Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe PPV
Chevrolet Tahoe PPV E85
Dodge Magnum 3.5L
Dodge Magnum 5.7L
Dodge Charger 5.7L
Dodge Charger 3.5L
seconds

ACCELERATION AND TOP SPEED TESTING

ACCELERATION TEST OBJECTIVE

Determine the ability of each test vehicle to accelerate from a standing start to 60 mph, 80 mph, and 100 mph, and determine the distance to reach 110 mph and 120 mph.

ACCELERATION TEST METHODOLOGY

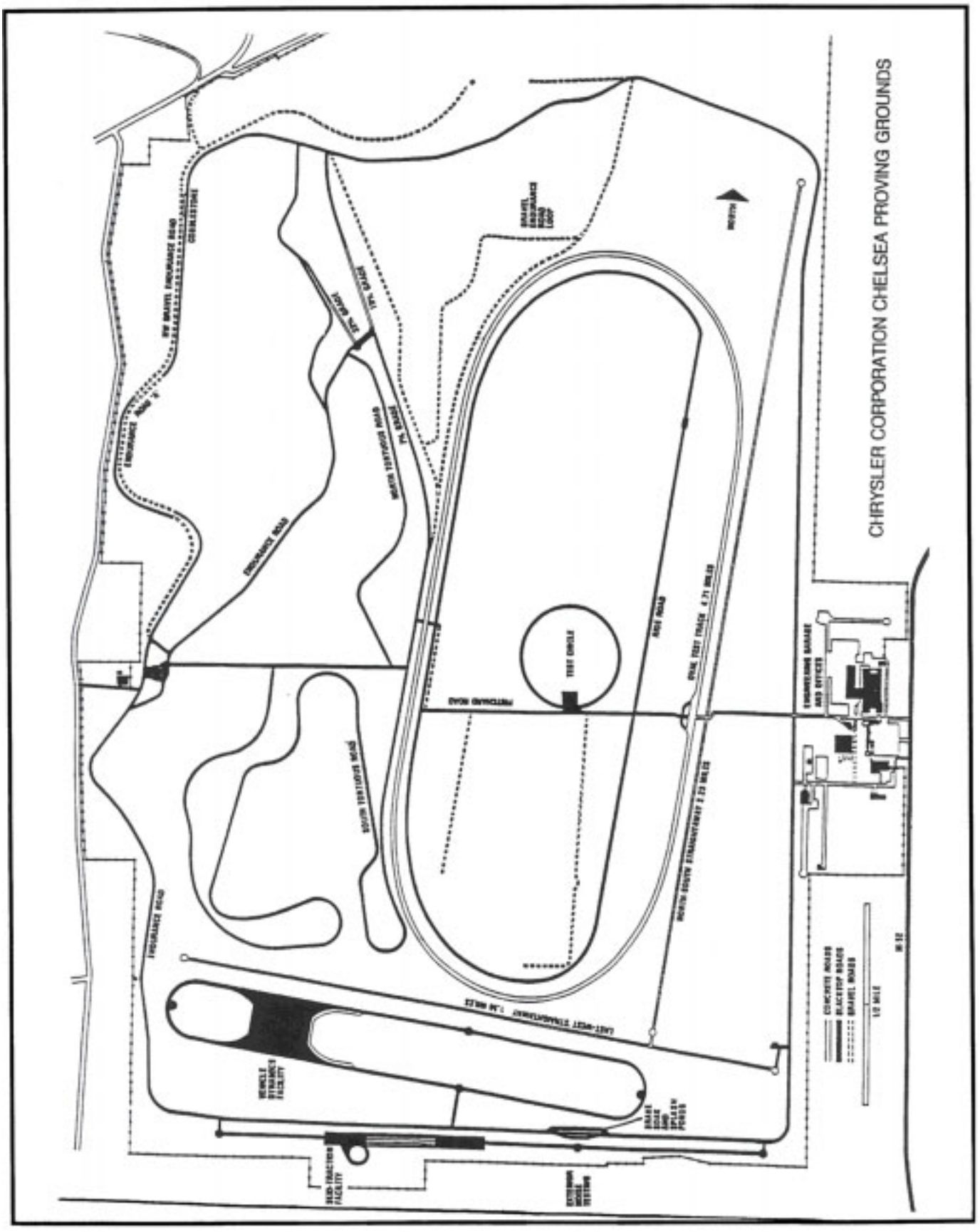
Using a DLS Smart Sensor – Optical non-contact Speed and Distance Sensor in conjunction with a lap top computer, each vehicle is driven through four acceleration sequences, two northbound and two southbound, to allow for wind direction. The four resulting times for each target speed are averaged and the average times used to derive scores on the competitive test for acceleration.

TOP SPEED TEST OBJECTIVE

Determine the actual top speed attainable by each test vehicle within a distance of 14 miles from a standing start.

TOP SPEED TEST METHODOLOGY

Following the fourth acceleration run, each test vehicle will continue to accelerate to the top speed attainable within 14 miles from the start of the run. The highest speed attained within the 14-mile distance will be the vehicle's score on the competitive test for top speed.


CHRYSLER CORPORATION CHELSEA PROVING GROUNDS

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

MAKE & MODEL: Ford Interceptor 4.6L 3.27 **BEGINNING TIME:** 10:30 a.m.

WIND VELOCITY: 8.1 mph **WIND DIRECTION:** 15° **TEMPERATURE:** 63.1°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**9.6 sec**	8.99	8.93	8.87	8.91	**8.93**
0 – 80	**16.4 sec.**	14.53	14.59	14.11	14.49	**14.43**
0 – 100	**27.1 sec.**	23.98	24.70	23.32	24.49	**24.12**

DISTANCE TO REACH: **110 MPH** .67 mile **120 MPH** 1.09 mile

TOP SPEED ATTAINED: 130 mph

MAKE & MODEL: Ford Police Interceptor 4.6L 3.55 **BEGINNING TIME:** 9:36 a.m.

WIND VELOCITY: 7.4 mph **WIND DIRECTION:** 355° **TEMPERATURE:** 60.9°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**9.6 sec**	8.59	8.76	8.54	8.61	**8.63**
0 – 80	**16.4 sec.**	14.05	14.63	13.95	14.19	**14.21**
0 – 100	**27.1 sec.**	22.85	24.03	22.85	23.79	**23.38**

DISTANCE TO REACH: **110 MPH** .65 mile **120 MPH** 1.34 mile

TOP SPEED ATTAINED: 120 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

MAKE & MODEL: Dodge Magnum 3.5L **BEGINNING TIME:** 8:45 a.m.

WIND VELOCITY: 6.2 mph **WIND DIRECTION:** 324° **TEMPERATURE:** 59.9°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**9.6 sec**	9.27	9.18	8.99	9.11	**9.14**
0 – 80	**16.4 sec.**	15.17	15.22	14.81	15.10	**15.08**
0 – 100	**27.1 sec.**	25.53	26.20	24.92	26.19	**25.71**

DISTANCE TO REACH: **110 MPH** .70 mile **120 MPH** 1.10 mile

TOP SPEED ATTAINED: 132 mph

MAKE & MODEL: Dodge Magnum 5.7L **BEGINNING TIME:** 12:36 p.m.

WIND VELOCITY: 5.1 mph **WIND DIRECTION:** 356° **TEMPERATURE:** 66.7°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**9.6 sec**	6.56	6.59	6.50	6.55	**6.55**
0 – 80	**16.4 sec.**	10.96	10.94	10.57	10.88	**10.84**
0 – 100	**27.1 sec.**	16.48	16.73	16.18	16.56	**16.49**

DISTANCE TO REACH: **110 MPH** .40 mile **120 MPH** .58 mile

TOP SPEED ATTAINED: 134 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

MAKE & MODEL: Dodge Charger 3.5L **BEGINNING TIME:** 8:21 a.m.

WIND VELOCITY: 4.6 mph **WIND DIRECTION:** 341° **TEMPERATURE:** 59.4°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**9.6 sec**	8.99	8.87	8.80	8.95	**8.90**
0 – 80	**16.4 sec.**	14.68	14.63	14.35	14.71	**14.59**
0 – 100	**27.1 sec.**	24.85	24.88	23.91	24.55	**24.55**

DISTANCE TO REACH: **110 MPH** .65 mile **120 MPH** .96 mile

TOP SPEED ATTAINED: 135 mph

MAKE & MODEL: Dodge Charger 5.7L **BEGINNING TIME:** 12:13p.m.

WIND VELOCITY: 8.8 mph **WIND DIRECTION:** 335° **TEMPERATURE:** 66.5°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**9.6 sec**	6.55	6.48	6.51	6.55	**6.52**
0 – 80	**16.4 sec.**	10.77	10.76	10.64	10.87	**10.76**
0 – 100	**27.1 sec.**	16.14	16.33	16.03	16.45	**16.24**

DISTANCE TO REACH: **110 MPH** .39 mile **120 MPH** .56 mile

TOP SPEED ATTAINED: 150 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

MAKE & MODEL: Chevrolet Impala 9C1 **BEGINNING TIME:** 9:08 a.m.

WIND VELOCITY: 8.5 mph **WIND DIRECTION:** 353° **TEMPERATURE:** 60.1°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**9.6 sec**	8.95	8.91	8.70	8.75	**8.83**
0 – 80	**16.4 sec.**	14.44	14.59	13.96	14.11	**14.28**
0 – 100	**27.1 sec.**	23.73	24.20	22.76	23.64	**23.58**

DISTANCE TO REACH: **110 MPH** .63 mile **120 MPH** .91 mile

TOP SPEED ATTAINED: 142 mph

MAKE & MODEL: Chevrolet Tahoe PPV E85 **BEGINNING TIME:** 10:02 a.m.

WIND VELOCITY: 5.7 mph **WIND DIRECTION:** 332° **TEMPERATURE:** 61.7°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**10.0 sec**	8.61	8.71	8.70	8.58	**8.65**
0 – 80	**16.0 sec.**	14.17	14.52	14.48	14.59	**14.44**
0 – 100	**27.0 sec.**	24.64	26.80	25.16	26.27	**25.72**

DISTANCE TO REACH: **110 MPH** .74 mile **120 MPH** 1.23 mile

TOP SPEED ATTAINED: 124 mph

*Michigan State Police minimum requirement.

ACCELERATION AND TOP SPEED TESTS

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

MAKE & MODEL: Chevrolet Tahoe PPV **BEGINNING TIME:** 10:58 a.m.

WIND VELOCITY: 6.2 mph **WIND DIRECTION:** 335° **TEMPERATURE:** 64.0°

ACCELERATION

SPEEDS	TIME REQUIREMENTS*	RUN#1	RUN#2	RUN#3	RUN#4	AVERAGE
0 – 60	**10.0 sec**	8.79	8.74	8.56	8.68	**8.69**
0 – 80	**16.0 sec.**	14.42	14.72	14.17	14.53	**14.46**
0 – 100	**27.0 sec.**	25.23	26.54	24.68	26.28	**25.68**

DISTANCE TO REACH: **110 MPH** .74 mile **120 MPH** 1.27 mile

TOP SPEED ATTAINED: 124 mph

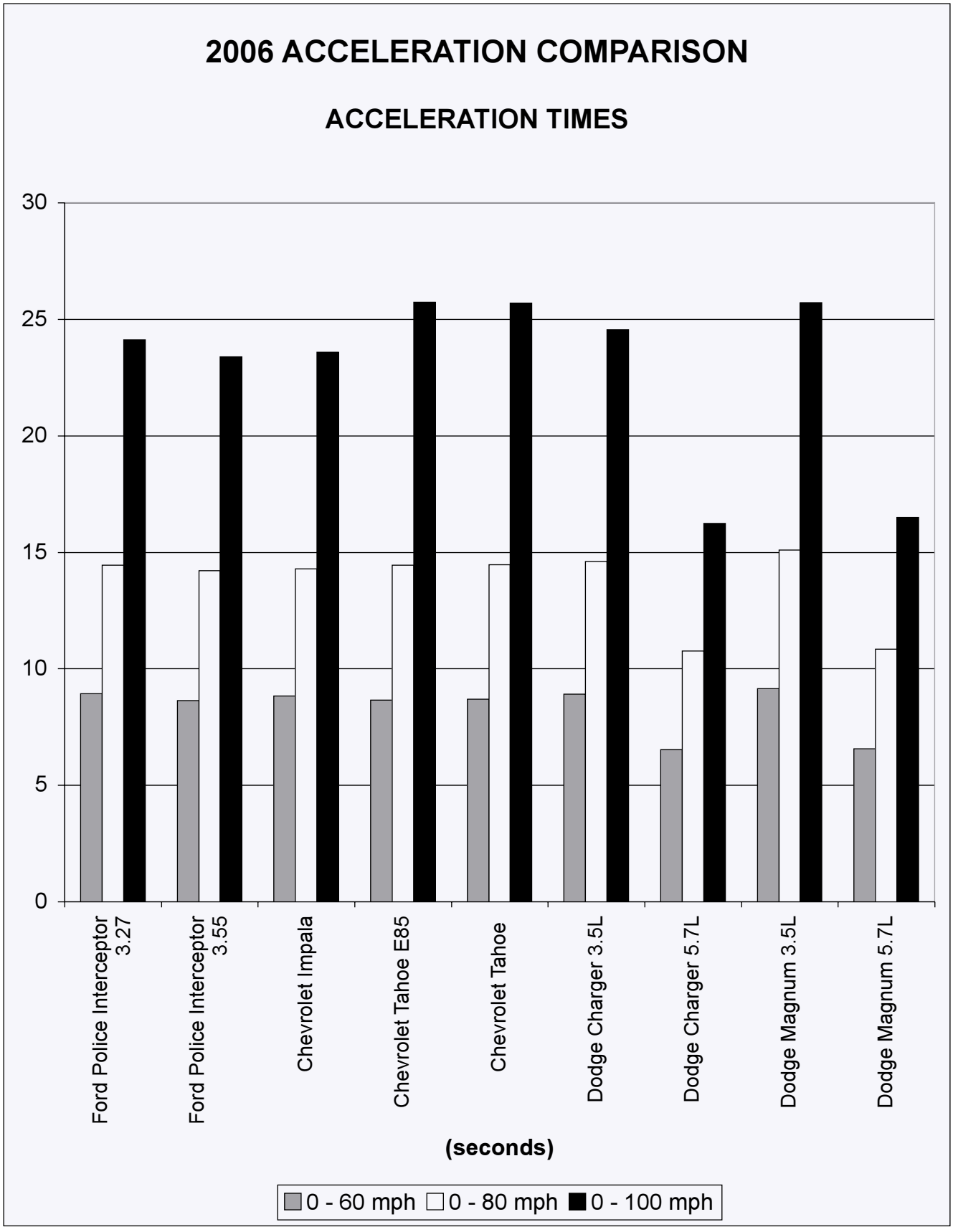
*Michigan State Police minimum requirement.

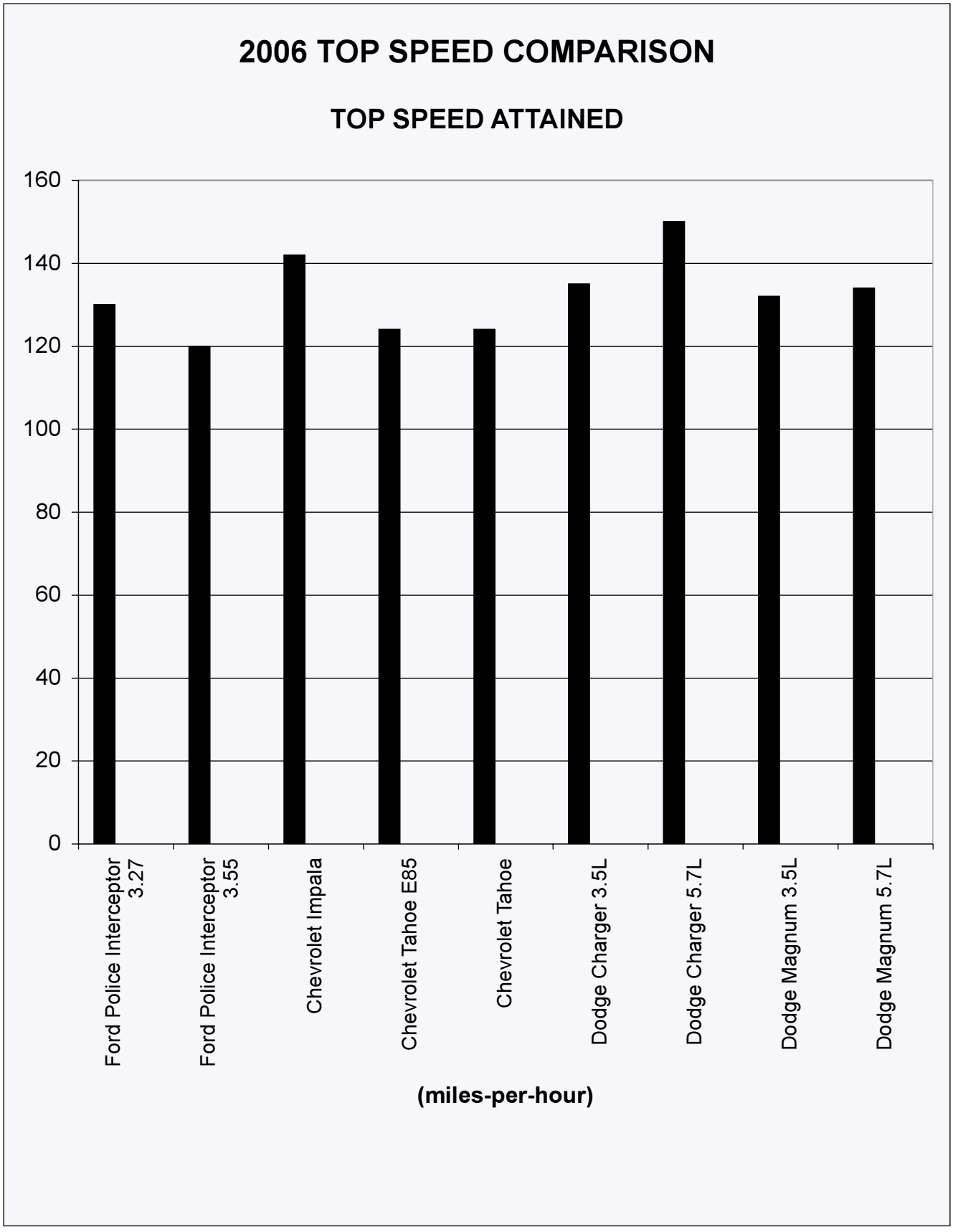
SUMMARY OF ACCELERATION AND TOP SPEED

ACCELERATION*		Ford Police Interceptor 4.6 L 3.27	Dodge Charger 3.5 L	Chevrolet Impala 9C1 3.9 L	Dodge Magnum 3.5 L	Chevrolet Tahoe PPV
0 – 20 mph	(sec.)	1.89	1.99	1.97	2.03	1.94
0 – 30 mph	(sec.)	3.21	3.37	3.29	3.43	3.18
0 – 40 mph	(sec.)	4.66	4.82	4.64	4.92	4.50
0 – 50 mph	(sec.)	6.62	6.61	6.29	6.76	6.48
0 – 60 mph	(sec.)	8.93	8.90	8.83	9.14	8.69
0 – 70 mph	(sec.)	11.42	11.56	11.50	11.93	11.15
0 – 80 mph	(sec.)	14.43	14.59	14.28	15.08	14.46
0 – 90 mph	(sec.)	18.80	19.06	17.70	19.88	19.68
0 – 100 mph	(sec.)	24.12	24.55	23.58	25.71	25.68
TOP SPEED	**(mph)**	130	135	142	132	124
DISTANCE TO REACH						
110 mph (miles)		.67	.65	.63	.70	.74
120 mph (miles)		1.09	.96	.91	1.10	1.27
QUARTER MILE						
Time	(sec.)	16.73	16.82	16.69	17.00	16.65
Speed (miles)		85.90	85.23	87.58	84.08	84.25

SUMMARY OF ACCELERATION AND TOP SPEED

ACCELERATION*		Ford Police Interceptor 4.6 L 3.55	Dodge Charger 5.7 L	Dodge Magnum 5.7 L	Chevrolet Tahoe PPV E85
0 – 20 mph	(sec.)	1.83	1.58	1.57	1.95
0 – 30 mph	(sec.)	3.05	2.56	2.56	3.19
0 – 40 mph	(sec.)	4.51	3.57	3.58	4.48
0 – 50 mph	(sec.)	6.50	5.01	5.03	6.42
0 – 60 mph	(sec.)	8.63	6.52	6.55	8.65
0 – 70 mph	(sec.)	11.10	8.23	8.33	11.04
0 – 80 mph	(sec.)	14.21	10.76	10.84	14.44
0 – 90 mph	(sec.)	18.42	13.33	13.52	19.63
0 – 100 mph	(sec.)	23.38	16.24	16.49	25.72
TOP SPEED	**(mph)**	120	150	134	124
DISTANCE TO REACH					
110 mph (miles)		.65	.39	.40	.74
120 mph (miles)		1.34	.56	.58	1.23
QUARTER MILE					
Time	(sec.)	16.57	15.00	15.05	16.61
Speed (miles)		85.45	95.90	95.25	84.45


2006 ACCELERATION COMPARISON
ACCELERATION TIMES
30
25
20
15
10
5
0
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
Dodge Charger 3.5L
Dodge Charger 5.7L
Dodge Magnum 3.5L
Dodge Magnum 5.7L
(seconds)
0 - 60 mph
0 - 80 mph
0 - 100 mph


2006 TOP SPEED COMPARISON
TOP SPEED ATTAINED
160
140
120
100
80
60
40
20
0
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
Dodge Charger 3.5L
Dodge Charger 5.7L
Dodge Magnum 3.5L
Dodge Magnum 5.7L
(miles-per-hour)

BRAKE TESTING

BRAKE TEST OBJECTIVE

Determine the deceleration rate attained by each test vehicle on twelve 60 – 0 mph impending skid (threshold) stops, with ABS in operation if the vehicle is so equipped. Each vehicle will be scored on the average deceleration rate it attains.

BRAKE TEST METHODOLOGY

Each vehicle will make two decelerations at specific predetermined points on the test road from 90 – 0 mph at 22 ft/s^2, with the driver using a decelerometer to maintain the deceleration rate. Immediately after these "heat-up" stops are completed, the vehicle will be turned around and will make six measured 60 – 0 mph impending skid (threshold) stops with ABS in operation, if so equipped, at specific predetermined points. Following a four 4-minute heat soak, the entire sequence will be repeated. The exact initial velocity at the beginning of each of the 60 – 0 mph decelerations, and the exact distance required to make each stop will be recorded by means of a non contact optical sensor in conjunction with electronic speed and distance meters. The data resulting from the twelve total stops will be used to calculate the average deceleration rate which is the vehicle's score for this test.

DECELERATION RATE FORMULA

$$\text{Deceleration Rate (DR)} = \frac{\text{Initial Velocity*(IV) squared}}{\text{2 times Stopping Distance (SD)}} = \frac{(IV)^2}{2(SD)}$$

EXAMPLE:

Initial Velocity = 89.175 ft/s (60.8 mph x 1.4667*)
Stopping Distance = 171.4 ft.

$$DR = \frac{(IV)^2}{2(SD)} = \frac{(89.175)^2}{2(171.4)} = \frac{7952.24}{342.8} = 23.198 \text{ ft/s}^2$$

Once a vehicle's average deceleration rate has been determined, it is possible to calculate the stopping distance from any given speed by utilizing the following formula:

Select a speed; translate that speed into feet per second; square the feet per second figure by multiplying it by itself; divide the resultant figure by 2; divide the remaining figure by the average deceleration rate of the vehicle in question.

EXAMPLE:

60 mph = 88.002 ft/s x 88.002 = 7744.352 / 2 = 3872.176 / 23.198 ft/s^2 = 166.9 ft.

*Initial velocity must be expressed in terms of feet per second, with 1 mile per hour being equal to 1.4667 feet per second.

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 12:44 p.m. **TEMPERATURE:** 66.6°F

MAKE & MODEL: Ford Police Interceptor 4.6L 3.27 **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	62.0 mph	157.9 feet	26.21 ft/s^2
Stop #2	61.4 mph	149.2 feet	27.15 ft/s^2
Stop #3	59.9 mph	146.0 feet	26.45 ft/s^2
Stop #4	59.7 mph	140.9 feet	27.24 ft/s^2
Stop #5	60.1 mph	142.8 feet	27.22 ft/s^2
Stop #6	59.5 mph	142.5 feet	26.75 ft/s^2

AVERAGE DECELERATION RATE 26.84 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	61.1 mph	147.4 feet	27.21 ft/s^2
Stop #2	59.1 mph	139.2 feet	26.98 ft/s^2
Stop #3	60.0 mph	140.3 feet	27.59 ft/s^2
Stop #4	59.5 mph	141.5 feet	26.91 ft/s^2
Stop #5	60.4 mph	140.9 feet	27.83 ft/s^2
Stop #6	60.1 mph	143.5 feet	27.04 ft/s^2

AVERAGE DECELERATION RATE 27.26 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 27.05 ft/s^2

Projected Stopping Distance from 60.0 mph 143.2

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 11:15 a.m. **TEMPERATURE:** 65.0 °F

MAKE & MODEL: Ford Police Interceptor 4.6L 3.55 **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.5 mph	141.8 feet	26.85 ft/s^2
Stop #2	59.5 mph	142.9 feet	26.60 ft/s^2
Stop #3	59.3 mph	139.0 feet	27.19 ft/s^2
Stop #4	61.1 mph	143.9 feet	27.88 ft/s^2
Stop #5	60.7 mph	147.2 feet	26.88 ft/s^2
Stop #6	60.0 mph	142.4 feet	27.21 ft/s^2

AVERAGE DECELERATION RATE 27.10 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.7 mph	143.6 feet	27.56 ft/s^2
Stop #2	59.6 mph	139.6 feet	27.41 ft/s^2
Stop #3	61.3 mph	150.6 feet	26.86 ft/s^2
Stop #4	60.5 mph	147.0 feet	26.79 ft/s^2
Stop #5	61.0 mph	147.6 feet	27.09 ft/s^2
Stop #6	61.1 mph	149.7 feet	26.82 ft/s^2

AVERAGE DECELERATION RATE 27.09 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 27.10 ft/s^2

Projected Stopping Distance from 60.0 mph 142.9

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** October 7, 2005

BEGINNING Time: 4:16 p.m.. **TEMPERATURE:** 52.2 °F

MAKE & MODEL: Chevrolet Impala 9C1 3.9L **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.7 mph	143.3 feet	26.75 ft/s^2
Stop #2	59.7 mph	141.8 feet	27.03 ft/s^2
Stop #3	59.7 mph	141.6 feet	27.07 ft/s^2
Stop #4	60.3 mph	143.1 feet	27.33 ft/s^2
Stop #5	60.1 mph	143.1 feet	27.15 ft/s^2
Stop #6	59.6 mph	141.3 feet	27.04 ft/s^2

AVERAGE DECELERATION RATE 27.06 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.4 mph	139.9 feet	27.13 ft/s^2
Stop #2	60.3 mph	143.5 feet	27.25 ft/s^2
Stop #3	60.3 mph	140.8 feet	27.78 ft/s^2
Stop #4	59.2 mph	140.4 feet	26.85 ft/s^2
Stop #5	60.5 mph	141.5 feet	27.82 ft/s^2
Stop #6	59.3 mph	139.9 feet	27.04 ft/s^2

AVERAGE DECELERATION RATE 27.31 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 27.19 ft/s^2

Projected Stopping Distance from 60.0 mph 142.4

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 9:37 a.m. **TEMPERATURE:** 60.9°F

MAKE & MODEL: Dodge Charger 3.5 L **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	61.9 mph	139.0 feet	29.61 ft/s^2
Stop #2	62.5 mph	138.0 feet	30.42 ft/s^2
Stop #3	61.3 mph	140.0 feet	28.88 ft/s^2
Stop #4	60.3 mph	130.5 feet	29.93 ft/s^2
Stop #5	59.3 mph	125.8 feet	30.07 ft/s^2
Stop #6	59.4 mph	126.9 feet	29.90 ft/s^2

AVERAGE DECELERATION RATE 29.80 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	62.1 mph	142.5 feet	29.09 ft/s^2
Stop #2	60.4 mph	131.9 feet	29.72 ft/s^2
Stop #3	61.3 mph	136.5 feet	29.58 ft/s^2
Stop #4	61.2 mph	134.1 feet	30.07 ft/s^2
Stop #5	60.5 mph	132.6 feet	29.64 ft/s^2
Stop #6	61.8 mph	135.3 feet	30.38 ft/s^2

AVERAGE DECELERATION RATE 29.75 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 29.77 ft/s^2

Projected Stopping Distance from 60.0 mph 130.1

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 1:31 p.m. **TEMPERATURE:** 67.9°F

MAKE & MODEL: Dodge Charger 5.7 L **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.3 mph	135.4 feet	28.86 ft/s^2
Stop #2	60.9 mph	133.7 feet	29.85 ft/s^2
Stop #3	61.5 mph	141.5 feet	28.70 ft/s^2
Stop #4	61.6 mph	140.4 feet	29.08 ft/s^2
Stop #5	61.3 mph	140.9 feet	28.69 ft/s^2
Stop #6	59.3 mph	128.0 feet	29.59 ft/s^2

AVERAGE DECELERATION RATE 29.13 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.5 mph	133.5 feet	28.52 ft/s^2
Stop #2	61.3 mph	143.1 feet	28.28 ft/s^2
Stop #3	60.5 mph	137.0 feet	28.75 ft/s^2
Stop #4	60.0 mph	132.6 feet	29.20 ft/s^2
Stop #5	60.2 mph	134.2 feet	29.09 ft/s^2
Stop #6	59.5 mph	129.0 feet	29.50 ft/s^2

AVERAGE DECELERATION RATE 28.89 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 29.01 ft/s^2

Projected Stopping Distance from 60.0 mph 133.5

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 10:18 a.m. **TEMPERATURE:** 62.5°F

MAKE & MODEL: Dodge Magnum 3.5 L **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	62.5 mph	136.5 feet	30.77 ft/s^2
Stop #2	59.3 mph	121.5 feet	31.08 ft/s^2
Stop #3	59.7 mph	126.4 feet	30.29 ft/s^2
Stop #4	59.4 mph	125.2 feet	30.29 ft/s^2
Stop #5	60.5 mph	131.3 feet	29.98 ft/s^2
Stop #6	59.2 mph	127.6 feet	29.55 ft/s^2

AVERAGE DECELERATION RATE 30.33 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	61.1 mph	133.9 feet	29.97 ft/s^2
Stop #2	59.5 mph	125.9 feet	30.40 ft/s^2
Stop #3	62.0 mph	136.2 feet	30.38 ft/s^2
Stop #4	59.2 mph	127.6 feet	29.56 ft/s^2
Stop #5	59.5 mph	127.2 feet	29.90 ft/s^2
Stop #6	60.9 mph	132.5 feet	30.13 ft/s^2

AVERAGE DECELERATION RATE 30.05 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 30.19 ft/s^2

Projected Stopping Distance from 60.0 mph 128.3

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 1:54 p.m. **TEMPERATURE:** 68.2 °F

MAKE & MODEL: Dodge Magnum 5.7 L **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.2 mph	125.0 feet	30.12 ft/s^2
Stop #2	60.4 mph	131.8 feet	29.75 ft/s^2
Stop #3	59.3 mph	129.8 feet	29.15 ft/s^2
Stop #4	58.8 mph	127.0 feet	29.25 ft/s^2
Stop #5	59.6 mph	125.7 feet	30.36 ft/s^2
Stop #6	60.0 mph	134.2 feet	28.87 ft/s^2

AVERAGE DECELERATION RATE 29.58 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.5 mph	128.2 feet	29.70 ft/s^2
Stop #2	60.6 mph	135.5 feet	29.11 ft/s^2
Stop #3	60.7 mph	132.4 feet	29.92 ft/s^2
Stop #4	60.0 mph	130.6 feet	29.61 ft/s^2
Stop #5	60.1 mph	132.2 feet	29.38 ft/s^2
Stop #6	59.6 mph	131.2 feet	29.16 ft/s^2

AVERAGE DECELERATION RATE 29.48 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 29.53 ft/s^2

Projected Stopping Distance from 60.0 mph 131.1

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 12:20 p.m. **TEMPERATURE:** 66.3°F

MAKE & MODEL: Chevrolet Tahoe 5.3L 2WD E85 **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	58.9 mph	137.7 feet	27.12 ft/s^2
Stop #2	60.2 mph	142.8 feet	27.32 ft/s^2
Stop #3	59.0 mph	138.4 feet	27.04 ft/s^2
Stop #4	59.4 mph	139.0 feet	27.29 ft/s^2
Stop #5	61.1 mph	147.5 feet	27.22 ft/s^2
Stop #6	59.0 mph	141.4 feet	26.43 ft/s^2

AVERAGE DECELERATION RATE 27.07 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.5 mph	140.7 feet	27.06 ft/s^2
Stop #2	59.7 mph	142.4 feet	26.92 ft/s^2
Stop #3	60.2 mph	142.0 feet	27.48 ft/s^2
Stop #4	59.1 mph	138.7 feet	27.05 ft/s^2
Stop #5	59.6 mph	141.5 feet	27.04 ft/s^2
Stop #6	60.0 mph	142.1 feet	27.30 ft/s^2

AVERAGE DECELERATION RATE 27.14 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 27.11 ft/s^2

Projected Stopping Distance from 60.0 mph 142.8

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 1:10 p.m. **TEMPERATURE:** 66.3 ℉

MAKE & MODEL: Chevrolet Tahoe 5.3L 2WD **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.4 mph	142.3 feet	26.66 ft/s^2
Stop #2	59.6 mph	142.4 feet	26.84 ft/s^2
Stop #3	59.7 mph	145.6 feet	26.34 ft/s^2
Stop #4	59.5 mph	141.4 feet	26.92 ft/s^2
Stop #5	60.4 mph	148.1 feet	26.46 ft/s^2
Stop #6	60.3 mph	145.9 feet	26.81 ft/s^2

AVERAGE DECELERATION RATE 26.67 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.5 mph	148.2 feet	26.59 ft/s^2
Stop #2	60.7 mph	150.8 feet	26.24 ft/s^2
Stop #3	60.3 mph	147.5 feet	26.51 ft/s^2
Stop #4	60.5 mph	147.7 feet	26.66 ft/s^2
Stop #5	60.4 mph	147.4 feet	26.64 ft/s^2
Stop #6	60.5 mph	146.4 feet	26.86 ft/s^2

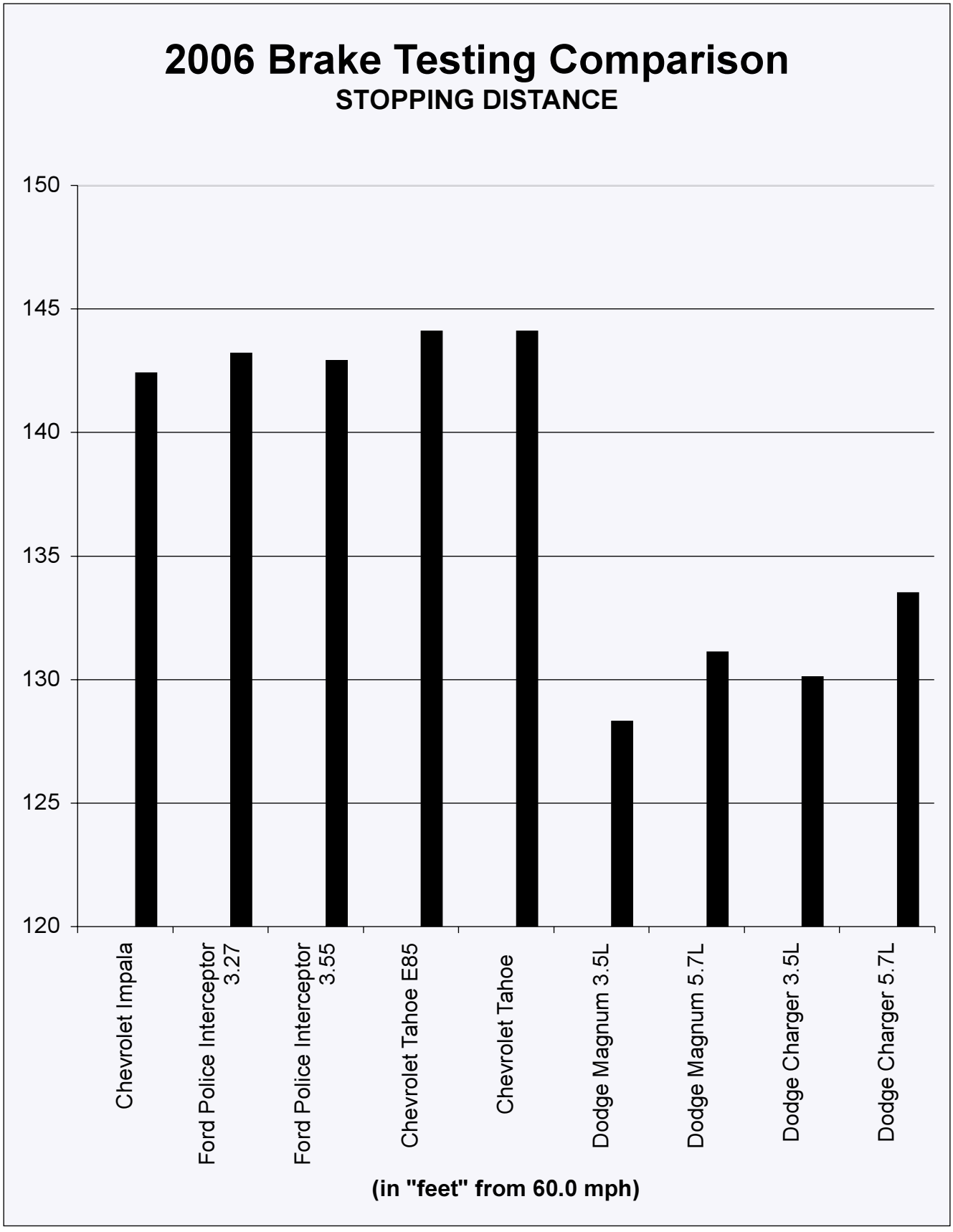
AVERAGE DECELERATION RATE 26.58 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 26.63 ft/s^2

Projected Stopping Distance from 60.0 mph 145.4


2006 Brake Testing Comparison
STOPPING DISTANCE
150
145
140
135
130
125
120
Chevrolet Impala
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Tahoe E85
Chevrolet Tahoe
Dodge Magnum 3.5L
Dodge Magnum 5.7L
Dodge Charger 3.5L
Dodge Charger 5.7L
(in "feet" from 60.0 mph)

ERGONOMICS AND COMMUNICATIONS

TEST OBJECTIVE

Rate each test vehicle's ability to:

1. Provide a suitable environment for the patrol officer in the performance of his/her assigned tasks.

2. Accommodate the required communications and emergency warning equipment and assess the relative difficulty of such installations.

TEST METHODOLOGY

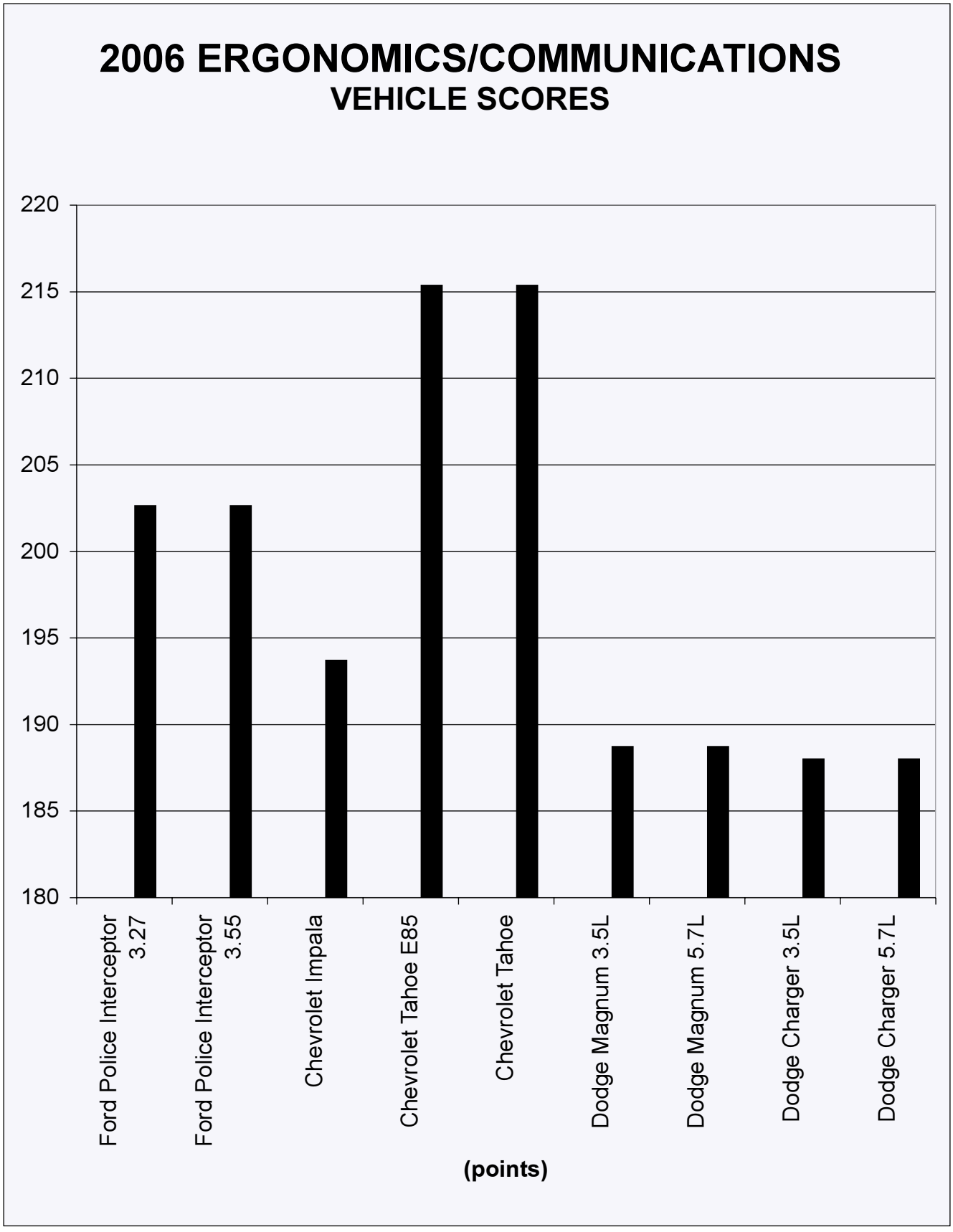
Utilizing the ergonomics portion of the form, a minimum of four officers (in this case 10) will individually and independently compare and score each test vehicle on the various comfort, instrumentation, and visibility items. The installation and communications portion of the evaluation will be conducted by personnel from the Michigan State Police Communications Division and Vehicle and Travel Services, based upon the relative difficulty of the necessary installations. Each factor will be graded on a 1 to 10 scale, with 1 representing "totally unacceptable," 5 representing "average," and 10 representing "superior." The scores will be averaged to minimize personal prejudice for or against any given vehicle.

ERGONOMICS AND COMMUNICATIONS

ERGONOMICS	Ford Police Interceptor 3.27	Dodge Charger 3.5 L	Chevrolet Impala 9C1	Dodge Magnum 3.5 L	Chevrolet Tahoe PPV
FRONT SEAT					
Padding	7.40	6.20	7.00	6.20	7.80
Depth of Bucket Seat	7.30	6.40	6.20	6.40	7.00
Adjustability – Front to Rear	8.00	8.50	7.80	8.10	7.00
Upholstery	7.10	6.40	7.40	6.30	7.60
Bucket Seat Design	6.70	6.40	6.80	6.30	8.20
Headroom	8.30	8.20	7.20	8.30	9.20
Seatbelts	6.40	7.60	7.60	7.50	6.40
Ease of Entry and Exit	7.30	7.60	6.90	7.30	8.10
Overall Comfort Rating	7.40	7.50	7.30	7.50	8.10
REAR SEAT					
Leg room – Front seat back	5.50	5.80	4.70	6.80	7.60
Ease of Entry and Exit	5.60	5.70	5.20	6.50	6.70
INSTRUMENTATION		0.00	0.00	0.00	0.00
Clarity	6.60	6.90	7.90	6.90	7.90
Placement	6.10	6.20	8.40	6.30	7.80
VEHICLE CONTROLS					
Pedals, Size and Position	6.50	7.30	7.00	7.40	8.00
Power Window Switch	7.40	7.00	7.40	6.90	7.90
Inside Door Lock Switch	6.50	7.80	6.40	7.80	6.70
Automatic Door Lock Switch	7.80	4.90	6.00	5.10	8.40
Outside Mirror Controls	7.00	6.40	6.20	6.30	8.30
Steering Wheel, Size, Tilt Release, and Surface	8.10	6.60	7.60	6.20	8.00
Heat/AC Vent Placement and Adjustability	7.40	6.70	6.40	6.80	7.50
VISIBILITY					
Front (Windshield)	7.40	6.90	7.30	6.60	7.70
Rear (Back Window)	7.30	5.70	6.10	4.60	6.60
Left Rear Quarter	7.20	6.60	6.60	5.70	5.30
Right Rear Quarter	6.80	5.80	6.20	5.50	5.50
Outside Rear View Mirrors	5.80	6.00	4.90	6.30	8.10
COMMUNICATIONS					
Dashboard Accessibility	8.25	6.40	7.88	9.13	9.88
Trunk Accessibility	10.00	6.50	8.83	6.50	9.33
Engine Compartment	9.50	8.00	8.50	7.50	8.75
TOTAL SCORES	**202.65**	**188.00**	**193.71**	**188.73**	**215.36**

ERGONOMICS AND COMMUNICATIONS

ERGONOMICS	Ford Police Interceptor 3.55	Dodge Charger 5.7 L	Dodge Magnum 5.7 L	Chevrolet Tahoe PPV E85
FRONT SEAT				
Padding	7.40	6.20	6.20	7.80
Depth of Bucket Seat	7.30	6.40	6.40	7.00
Adjustability – Front to Rear	8.00	8.50	8.10	7.00
Upholstery	7.10	6.40	6.30	7.60
Bucket Seat Design	6.70	6.40	6.30	8.20
Headroom	8.30	8.20	8.30	9.20
Seatbelts	6.40	7.60	7.50	6.40
Ease of Entry and Exit	7.30	7.60	7.30	8.10
Overall Comfort Rating	7.40	7.50	7.50	8.10
REAR SEAT				
Leg room – Front seat back	5.50	5.80	6.80	7.60
Ease of Entry and Exit	5.60	5.70	6.50	6.70
INSTRUMENTATION		0.00	0.00	0.00
Clarity	6.60	6.90	6.90	7.90
Placement	6.10	6.20	6.30	7.80
VEHICLE CONTROLS				
Pedals, Size and Position	6.50	7.30	7.40	8.00
Power Window Switch	7.40	7.00	6.90	7.90
Inside Door Lock Switch	6.50	7.80	7.80	6.70
Automatic Door Lock Switch	7.80	4.90	5.10	8.40
Outside Mirror Controls	7.00	6.40	6.30	8.30
Steering Wheel, Size, Tilt Release, and Surface	8.10	6.60	6.20	8.00
Heat/AC Vent Placement and Adjustability	7.40	6.70	6.80	7.50
VISIBILITY				
Front (Windshield)	7.40	6.90	6.60	7.70
Rear (Back Window)	7.30	5.70	4.60	6.60
Left Rear Quarter	7.20	6.60	5.70	5.30
Right Rear Quarter	6.80	5.80	5.50	5.50
Outside Rear View Mirrors	5.80	6.00	6.30	8.10
COMMUNICATIONS				
Dashboard Accessibility	8.25	6.40	9.13	9.88
Trunk Accessibility	10.00	6.50	6.50	9.33
Engine Compartment	9.50	8.00	7.50	8.75
TOTAL SCORES	**202.65**	**188.00**	**188.73**	**215.36**


2006 ERGONOMICS/COMMUNICATIONS
VEHICLE SCORES
220
215
210
205
200
195
190
185
180
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
Dodge Magnum 3.5L
Dodge Magnum 5.7L
Dodge Charger 3.5L
Dodge Charger 5.7L
(points)

FUEL ECONOMY

TEST OBJECTIVE

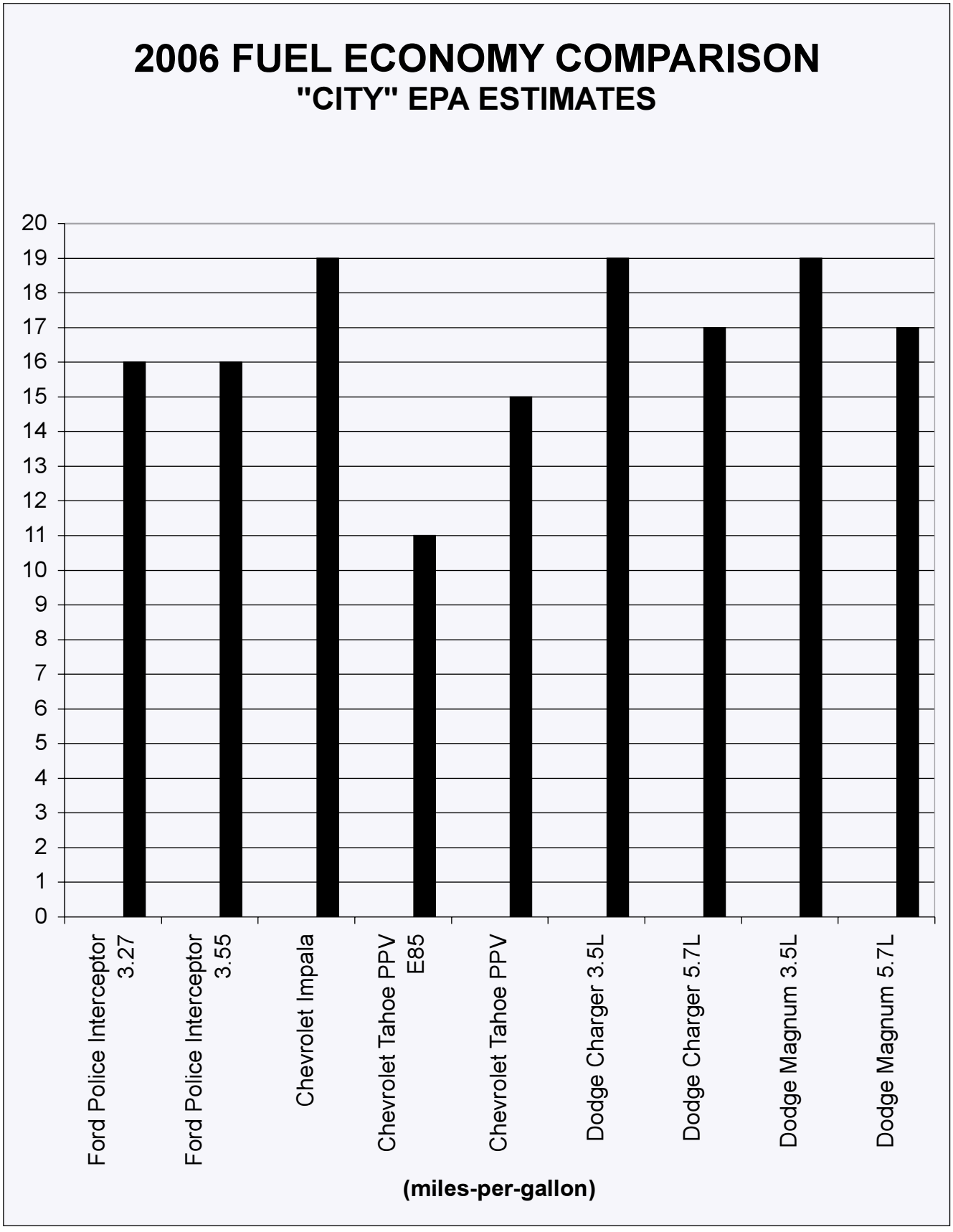
Determine the fuel economy potential of all vehicles being evaluated. The data used for scoring are both valid and reliable in a comparison sense, while not necessarily being an accurate predictor of actual fuel economy in police patrol service.

TEST METHODOLOGY

The vehicles will be scored based on estimates for city fuel economy to the nearest 1/10th mile per gallon (mpg) developed from data supplied by the vehicle manufacturer and certified by the Environmental Protection Agency.

Vehicles Make/Model/Engine	E.P.A. Miles Per Gallon		
	City*	Highway	Combined
Ford 4.6L SPFI Police Interceptor 3.27	16 (15.6)	23	18
Ford 4.6L SPFI Police Interceptor 3.55	16 (15.6)	23	18
Chevrolet Impala 3.9L SPFI	19 (18.8)	25	21
Dodge Charger 3.5L SPFI	19 (18.8)	27	22
Dodge Charger 5.7L SPFI	17 (16.9)	25	20
Dodge Magnum 3.5L SPFI	19 (18.8)	27	22
Dodge Magnum 5.7L SPFI	17 (16.9)	25	20
Chevrolet Tahoe 5.3L SPFI PPV E85	11 (11.0)	14	12
Chevrolet Tahoe 5.3L SPFI PPV	15 (14.6)	18	16

*Scored on city mileage only to the nearest 1/10 mpg.


2006 FUEL ECONOMY COMPARISON
"CITY" EPA ESTIMATES
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe PPV E85
Chevrolet Tahoe PPV
Dodge Charger 3.5L
Dodge Charger 5.7L
Dodge Magnum 3.5L
Dodge Magnum 5.7L
(miles-per-gallon)

MICHIGAN STATE POLICE
SCORING AND BID ADJUSTMENT METHODOLOGY*

STEP I: RAW SCORES

Raw scores are developed, through testing, for each vehicle in each of six evaluation categories. The raw scores are expressed in terms of seconds, feet per second^2, miles-per-hour, points, and miles-per-gallon.

VEHICLE DYNAM. (seconds)	BRAKING RATE (ft/sec^2)	ACCEL. (seconds)	TOP SPEED (mph)	ERGONOMICS & COMMUN. (points)	FUEL ECONOMY (mpg)
92.210	26.380	45.790	115.000	173.900	14.300

STEP II: DEVIATION FACTOR

In each evaluation category, the best scoring vehicle's score is used as the benchmark against which each of the other vehicles' scores are compared. (In the Vehicle Dynamics and Acceleration categories the lowest score is best, while in the remainder of the categories the highest score is best.) The best scoring vehicle in a given category received a deviation factor of "0." The "deviation factor" is then calculated by determining the absolute difference between each vehicle's raw score and the best score in that category. The absolute difference is then divided by the best score, with the result being the "deviation factor."

CAR MAKE MODEL	TOP SPEED
CAR "A"	115.000 **.042**
CAR "B"	118.800 **.010**
CAR "C"	117.900 **.018**
CAR "D"	120.000 **0**

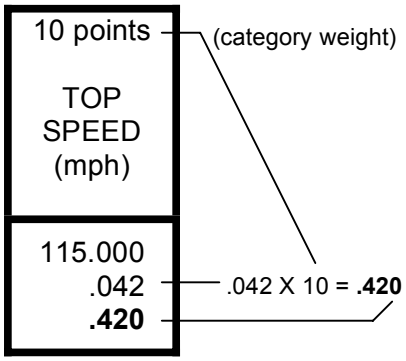
EXAMPLE:

Best Score (Car "D")		Other Vehicle Score (Car "A")		Absolute Difference		Best Score		Deviation Factor (Car "A")
120.000	-	115.000	=	5	/	120.000	=	**.042**

STEP III: WEIGHTED CATEGORY SCORE

Each vehicle's weighted category score is determined by multiplying the deviation factor (as determined in Step II) by the category weight.

RAW SCORE
DEVIATION FACTOR
WEIGHTED CATEGORY SCORE



*All mathematical computations are to be rounded to the third decimal place.

STEP IV: TOTAL WEIGHTED SCORE

Adding together the six (6) weighted category scores for that vehicle derives the total weighted score for each vehicle.

EXAMPLE:

CAR	30 pts. VEH. DYN. (seconds)	25 pts. BRAKE DECEL. (ft/sec^2)	20 pts. ACCEL. (seconds)	10 pts. TOP SPEED (mph)	10 pts. ERGO/ COMM. (points)	5 pts. FULE ECON. (mpg)	TOTAL WEIGHTED SCORE
Car "A"	92.210 .018 .540	45.790 .163 4.075	26.380 0 0	115.000 .042 .420	173.900 .184 1.840	14.300 0 0	**6.875**

STEP V: BID ADJUSTMENT FIGURE

The bid adjustment figure that we have chosen to use is one percent (1%) of the lowest bid price received. As an example, in this and the following two steps, the lowest bid price received was $15,238.00, which results in a bid adjustment figure of **$152.38**.

STEP VI: ACTUAL DOLLAR ADJUSTMENT

The actual dollar adjustment for a vehicle is determined by multiplying that vehicle's total weighted score by the bid adjustment figure as shown at right.

TOTAL WTD. SCORE	BID ADJ. FIGURE	ACTUAL DOLLAR ADJ.
	X	**=**
6.875	$152.38	**$1,047.61**

STEP VII: ADJUSTED BID PRICE

The actual dollar adjustment amount arrived at for each vehicle is added to that vehicle's bid price. Provided other necessary approvals are received, the vehicle with the lowest adjusted bid price will be the vehicle purchased. (The amount paid for the purchased vehicles will be the actual bid price.)

ACTUAL DOLLAR ADJ.	ACTUAL BID PRICE	ADJ. BID PRICE
	+	**=**
$955.42	$15,473.00	**$16,520.61**

PERFORMANCE COMPARISONS OF 2005 AND 2006 TEST VEHICLES

The following charts illustrate the scores achieved by each make and model of vehicle tested for model years 2005 and 2006. The charts presented are for the following performance categories:

Vehicle Dynamics
Acceleration 0 – 60 mph
Acceleration 0 – 80 mph
Acceleration 0 – 100 mph
Top Speed
Braking (Calculated 60 – 0 mph Stopping Distance)

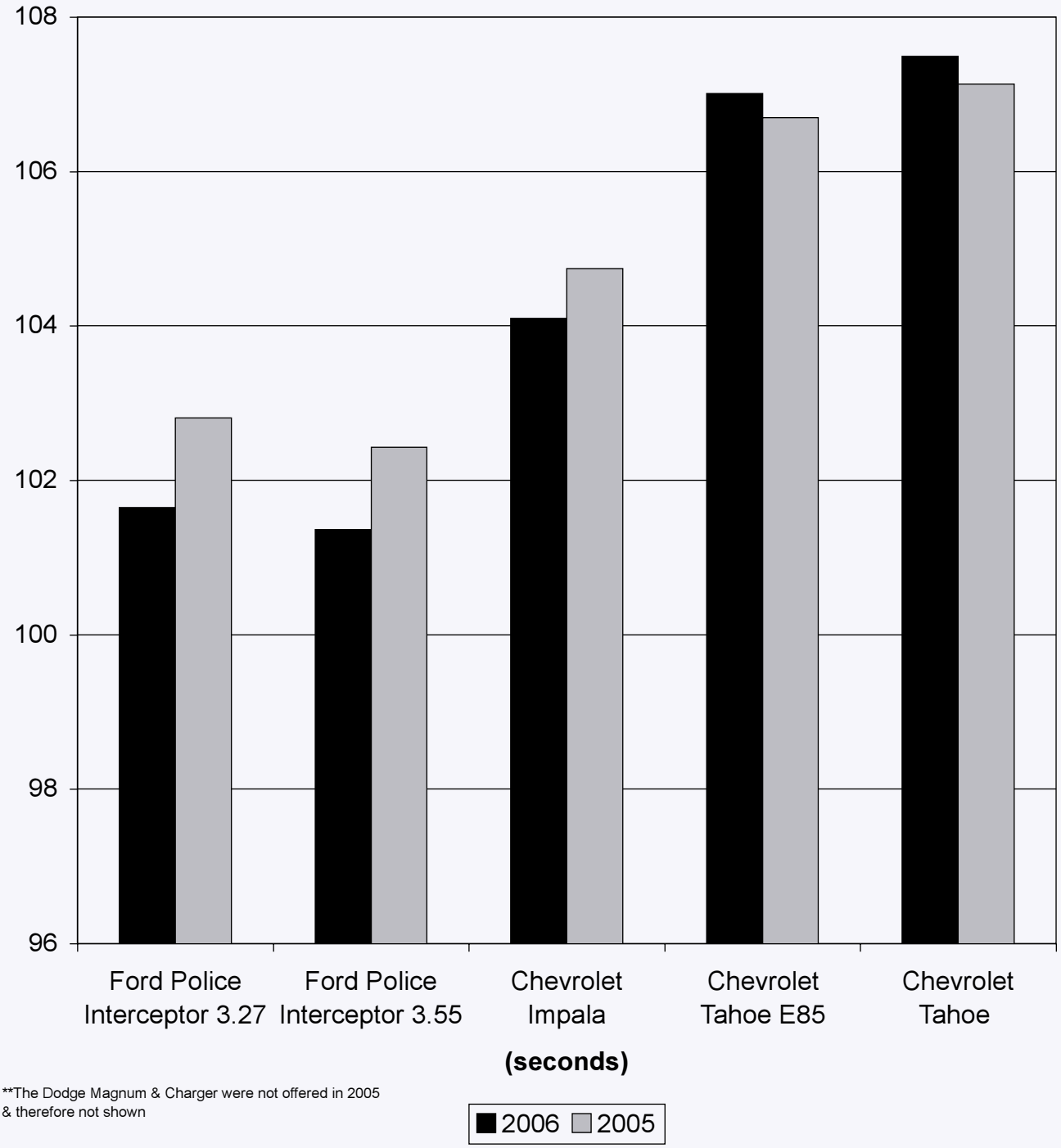
The reader should bear in mind the following information regarding variables when reviewing the 2005 – 2006 performance comparison charts. While as many variables as possible are eliminated from a given year's testing, those that occur over the span of a full year are sometimes impossible to eliminate.

The acceleration, top speed, and brake testing of both the 2005 and 2006 model year vehicles were conducted in the latter half of September. Temperatures on the test day in September of 2004 ranged between 48.5° F at the start of testing to a high of approximately 73.7° F during the afternoon. Temperatures during the testing this year varied, ranging between 59.0° F when testing started, to an afternoon high of 66.8° F. Such things as temperature, humidity, and barometric pressure affect the performance of internal combustion engines and brake components, and may cause minor differences from one year's evaluation to the next.

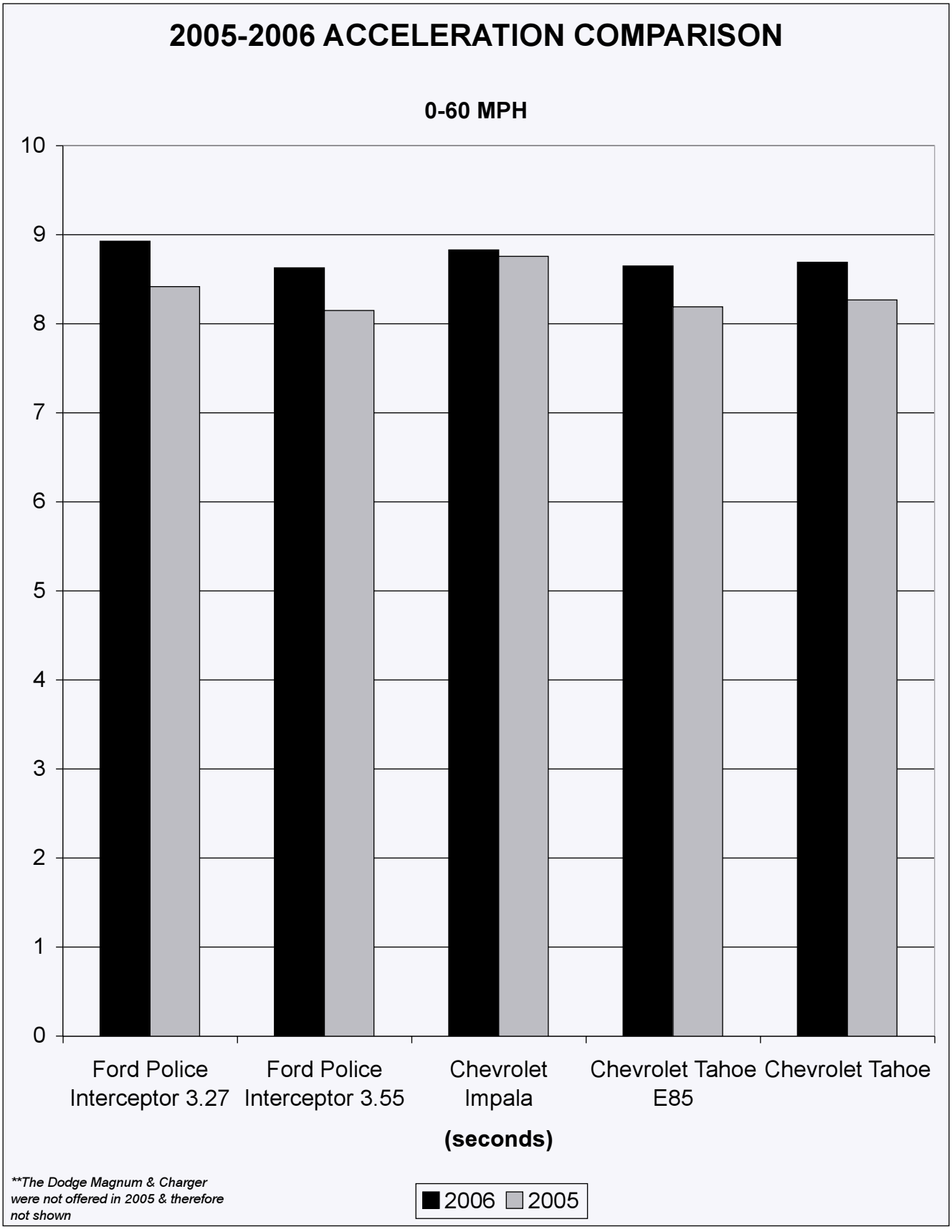
Another factor to be considered is the individual differences between two cars of the same make and model. The test cars that we evaluate are representative of their given make and model. Other cars of the same make and model will not, however, be exactly the same, particularly when it comes to performance. (It is well known that two consecutive cars off the same assembly line will perform slightly differently from each other.) Minor differences in performance from year to year within the same make and model are not only possible, but are to be expected.

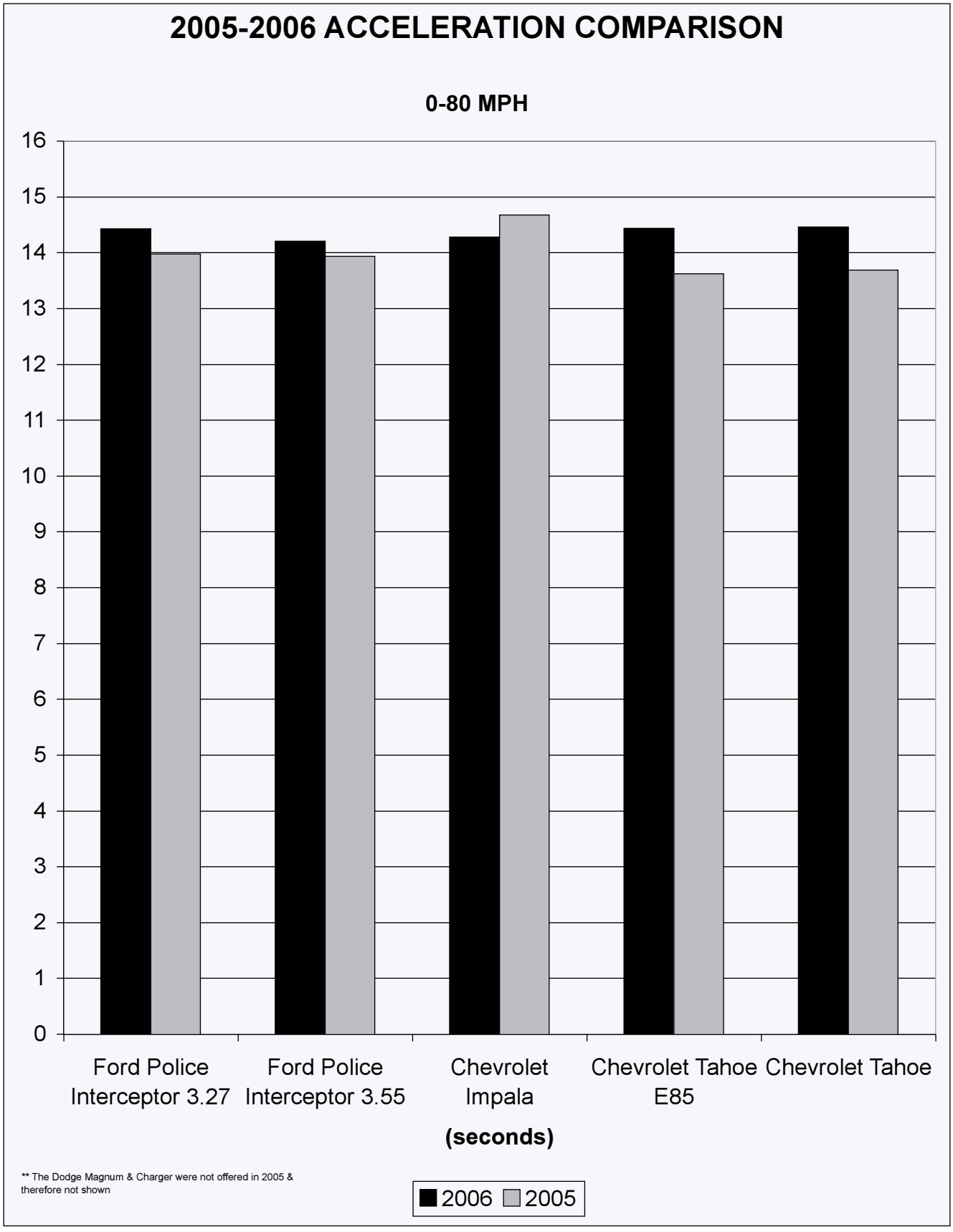
2005-06 Vehicle Dynamics Comparison

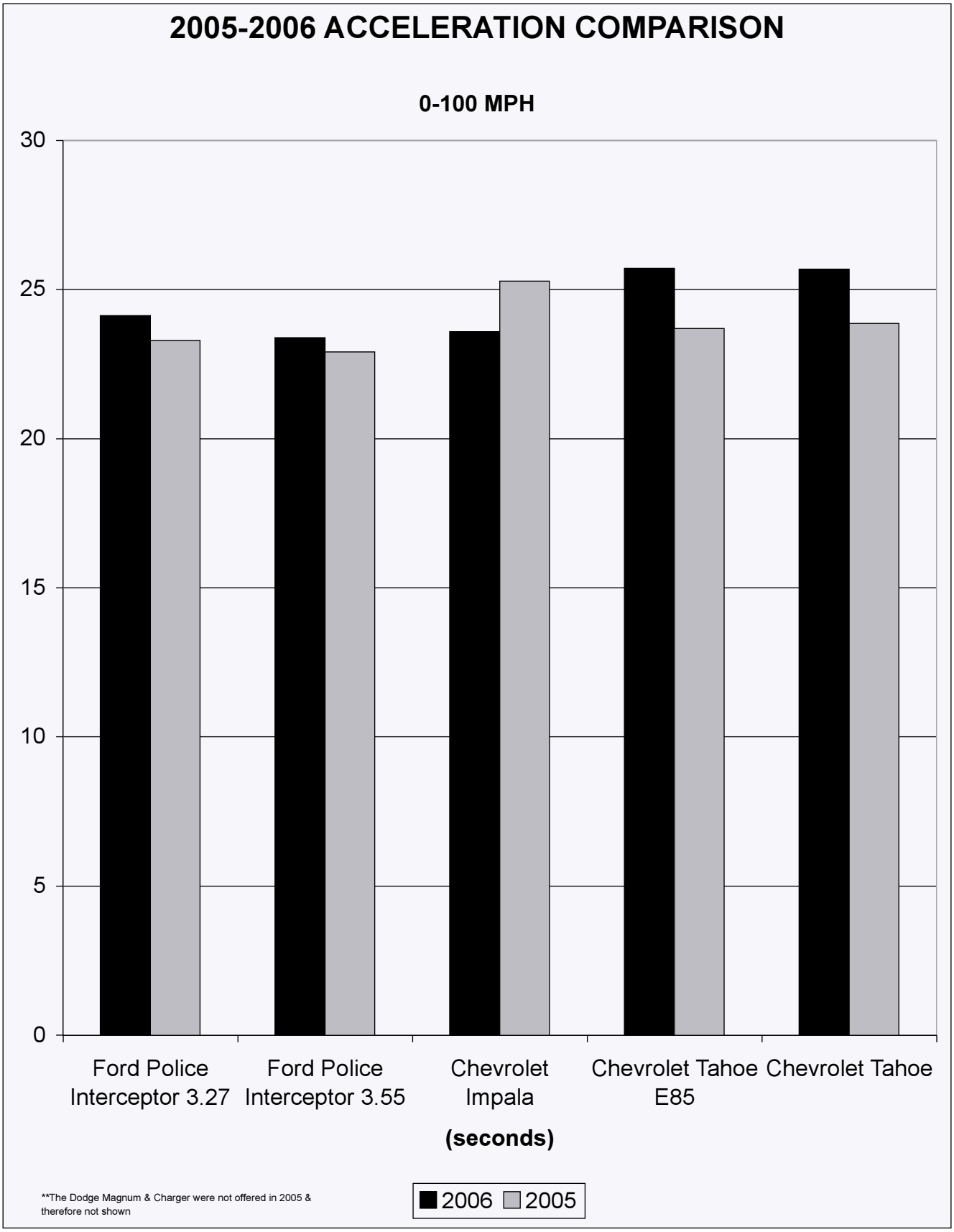
LAP TIMES

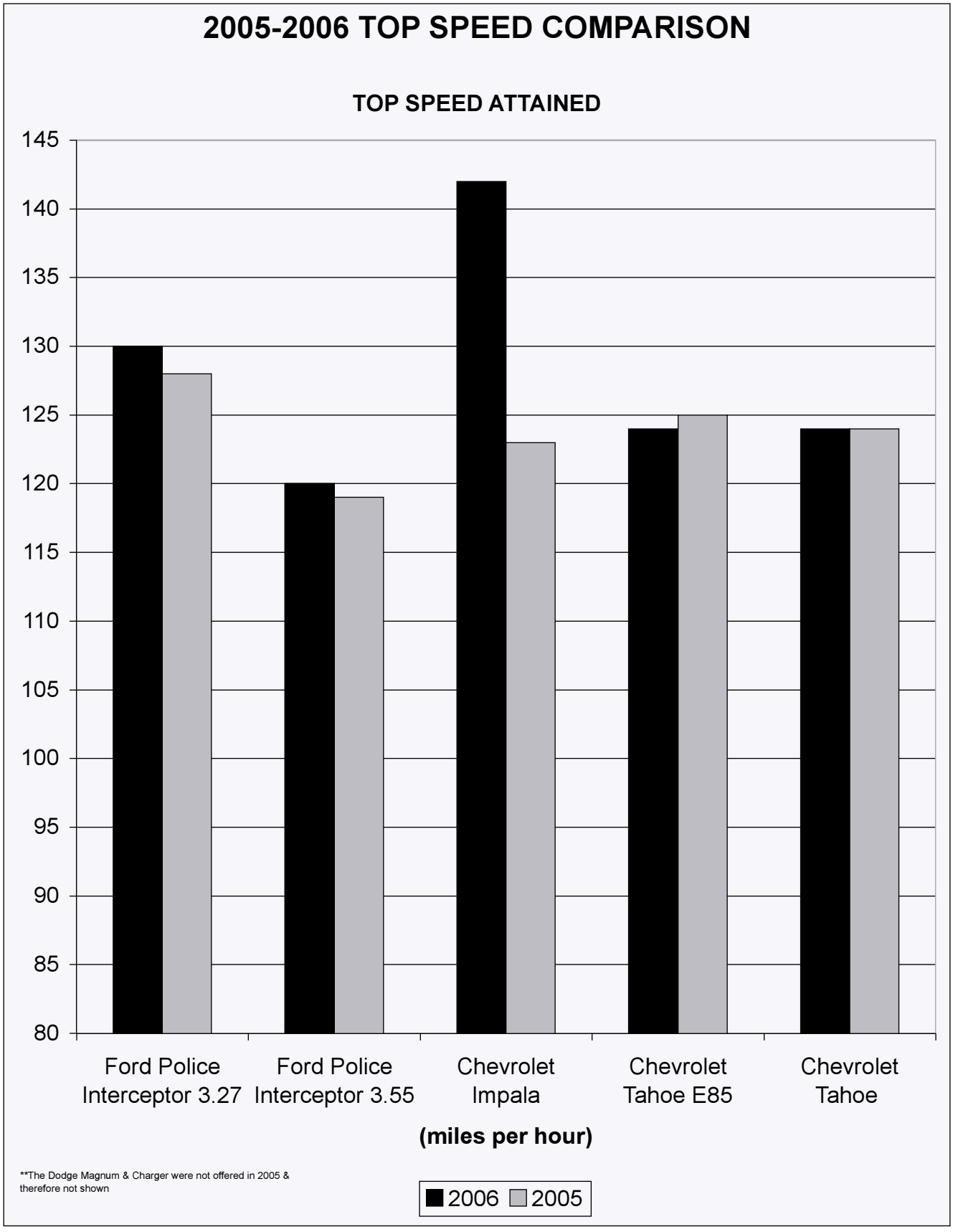


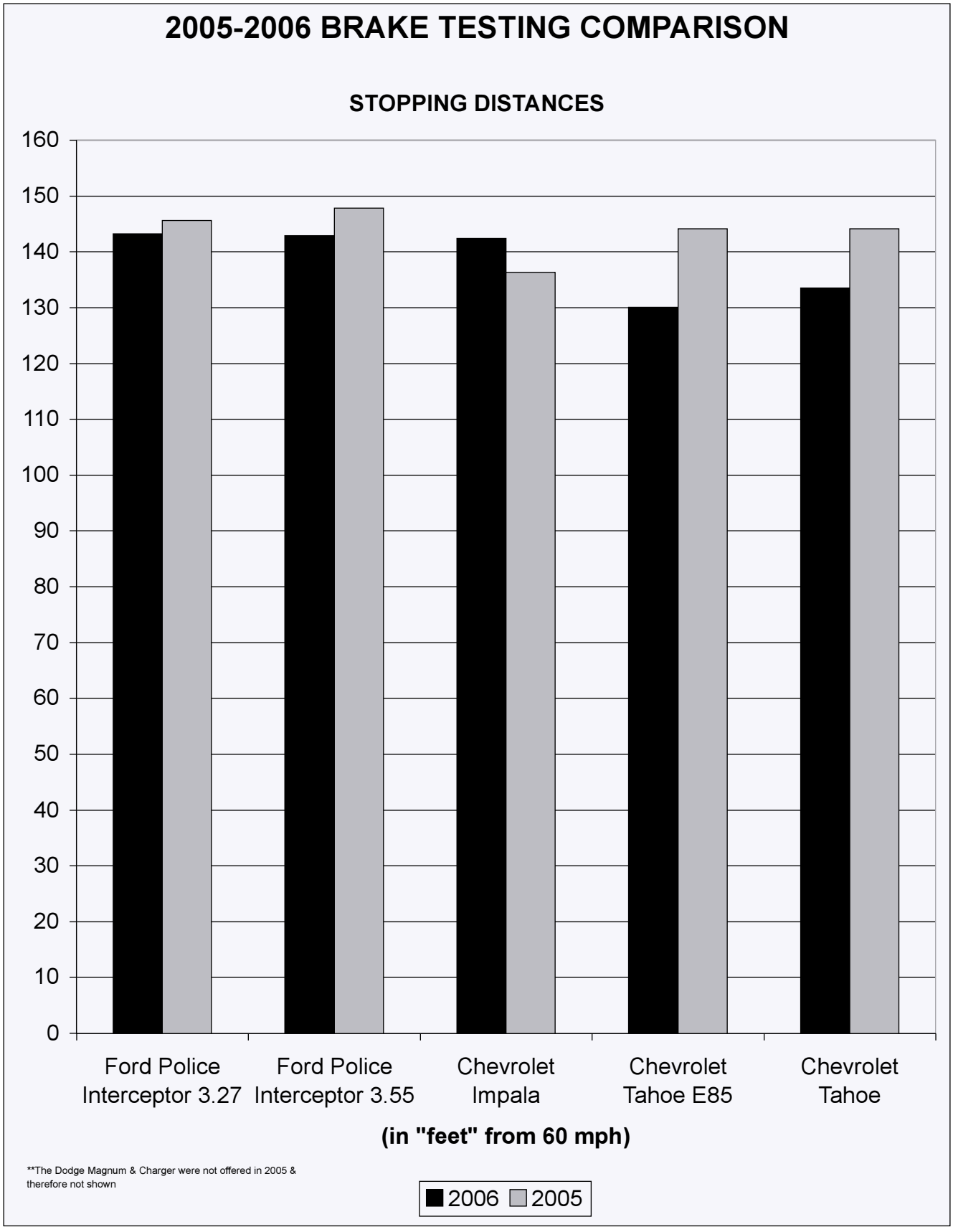
**The Dodge Magnum & Charger were not offered in 2005 & therefore not shown


2005-2006 ACCELERATION COMPARISON
0-60 MPH
10
9
8
7
6
5
4
3
2
1
0
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
(seconds)
**The Dodge Magnum & Charger were not offered in 2005 & therefore not shown
2006
2005


2005-2006 ACCELERATION COMPARISON
0-80 MPH
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
(seconds)
** The Dodge Magnum & Charger were not offered in 2005 & therefore not shown
2006
2005


2005-2006 ACCELERATION COMPARISON
0-100 MPH
30
25
20
15
10
5
0
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
(seconds)
**The Dodge Magnum & Charger were not offered in 2005 & therefore not shown
2006
2005


2005-2006 TOP SPEED COMPARISON
TOP SPEED ATTAINED
145
140
135
130
125
120
115
110
105
100
95
90
85
80
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
(miles per hour)
**The Dodge Magnum & Charger were not offered in 2005 & therefore not shown
2006
2005


2005-2006 BRAKE TESTING COMPARISON
STOPPING DISTANCES
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
Ford Police Interceptor 3.27
Ford Police Interceptor 3.55
Chevrolet Impala
Chevrolet Tahoe E85
Chevrolet Tahoe
(in "feet" from 60 mph)
**The Dodge Magnum & Charger were not offered in 2005 & therefore not shown
2006
2005

SPECIAL SERVICE VEHICLES

The issue of what makes a police vehicle a “police package” is a matter that will be with us for some time. Many law enforcement agencies still require a police vehicle to be capable of participating in a pursuit and look to the manufacturers to put their engineering talents towards that goal. At the same time some law enforcement agencies need a vehicle that has cargo capacity and other attributes, but does not require pursuit capabilities. For this, the manufacturers offer “special service” vehicles.

The Michigan Department of State Police presents this information on “special service” vehicles with the caveat that the reader is aware that these vehicles are not engineered for high speed or pursuit driving. The vehicles were tested in all the categories except vehicle dynamics, which is high-speed handling and represents pursuit applications.

The special service vehicles were tested in the following: Acceleration, Top Speed, Braking, Fuel Economy, and Ergonomics & Communications.

SPECIAL SERVICE VEHICLES ARE NOT ENGINEERED FOR HIGH SPEED AND PURSUIT APPLICATIONS.

NOT DESIGNED FOR HIGH SPEED OR PURSUIT DRIVING

Chevrolet Tahoe 4WD

TEST VEHICLE DESCRIPTION

MAKE Chevrolet	**MODEL** Tahoe 5W4 – 4WD	**SALES CODE NO.** CK15706	
ENGINE DISPLACEMENT	**CUBIC INCHES** 327	**LITERS** 5.3 Note: 4.8L Engine is Standard	
FUEL SYSTEM	Sequential Port Fuel Injection	**EXHAUST** Single	
HORSEPOWER (SAENET)	285 @ 5200 RPM	**ALTERNATOR** 130	
TORQUE	325 ft-lbs @ 4000 RPM	**BATTERY** 600 CCA	
COMPRESSION RATIO	9.5:1		
TRANSMISSION	**MODEL** 4L60E	**TYPE** 4 – Speed Automatic Overdrive	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	3.42		
STEERING	Power – recirculating ball		
TURNING CIRCLE (CURB TO CURB)	38.3 ft.		
TIRE SIZE, LOAD & SPEED RATING	LT245/75R16 Firestone Steeltex Radial A/T		
SUSPENSION TYPE (FRONT)	Independent, single lower arm with torsion bar		
SUSPENSION TYPE (REAR)	Multi-link with coil springs		
GROUND CLEARANCE, MINIMUM	10.7 in.	**LOCATION** Front Differential	
BRAKE SYSTEM	Hydro-boost, power, anti-lock		
BRAKES, FRONT	**TYPE** Disc	**SWEPT AREA** 213 sq. in.	
BRAKES, REAR	**TYPE** Disc	**SWEPT AREA** 133 sq. in.	
FUEL CAPACITY	**GALLONS** 26.0	**LITERS** 98.4	
GENERAL MEASUREMENTS	**WHEELBASE** 116 in.	**LENGTH** 198.9 in.	
	TEST WEIGHT 5329	**HEIGHT** 76.3 in.	
HEADROOM	**FRONT** 40.7 in.	**REAR** 39.4 in.	
LEGROOM	**FRONT** 41.3 in.	**REAR** 38.6 in.	
SHOULDER ROOM	**FRONT** 65.2 in.	**REAR** 65.1 in.	
HIPROOM	**FRONT** 61.4 in.	**REAR** 61.3 in.	
INTERIOR VOLUME ***MAX. CARGO IS W/REAR SEATS FOLDED DOWN**	**FRONT** 94.3 cu. ft.	**REAR** 57.3 cu. ft.	
	COMB 151.6 cu. ft.	***MAX. CARGO** 168.2 cu. ft.	
EPA MILEAGE EST. (MPG)	**CITY** 15	**HIGHWAY** 19	**COMBINED** 16

NOT DESIGNED FOR HIGH SPEED OR PURSUIT DRIVING

Ford Explorer

2WD

TEST VEHICLE DESCRIPTION

MAKE Ford	**MODEL** Explorer 2WD	**SALES CODE NO.** U63	
ENGINE DISPLACEMENT	**CUBIC INCHES** 281	**LITERS** 4.6	
FUEL SYSTEM	Sequential Multiport Fuel Injection	**EXHAUST** Single	
HORSEPOWER (SAENET)	292@ 3950 RPM	**ALTERNATOR** 130 amp.	
TORQUE	300 lb-ft @ 4000 RPM	**BATTERY** 650 CCA	
COMPRESSION RATIO	9.3:1		
TRANSMISSION	**MODEL** 5R55	**TYPE** 6-Speed Automatic Overdrive	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	3.55		
STEERING	Power rack and pinion		
TURNING CIRCLE (CURB TO CURB)	36.75 ft.		
TIRE SIZE, LOAD & SPEED RATING	P235/65/R18 Michelin Cross Terrain		
SUSPENSION TYPE (FRONT)	Independent SLA with coil spring		
SUSPENSION TYPE (REAR)	Independent SLA with coil spring		
GROUND CLEARANCE, MINIMUM	8.5 in.	**LOCATION** Transmission crossmember	
BRAKE SYSTEM	Power disc w/ 4-wheel ABS		
BRAKES, FRONT	**TYPE** Disc	**SWEPT AREA** 234.6 sq. in.	
BRAKES, REAR	**TYPE** Disc	**SWEPT AREA** 170.8 sq. in.	
FUEL CAPACITY	**GALLONS** 22.5	**LITERS** 85.1	
GENERAL MEASUREMENTS	**WHEELBASE** 113.7 in.	**LENGTH** 193.4 in.	
	TEST WEIGHT 4873	**HEIGHT** 72.2 in.	
HEADROOM	**FRONT** 39.8 in.	**REAR** 38.7 in.	
LEGROOM	**FRONT** 42.4 in.	**REAR** 36.9 in.	
SHOULDER ROOM	**FRONT** 59.0 in.	**REAR** 59.0 in.	
HIPROOM	**FRONT** 55.4 in.	**REAR** 55.5 cu. ft.	
INTERIOR VOLUME ***MAX. CARGO IS W/REAR SEATS FOLDED DOWN**	**FRONT** 57.6 cu. ft.	**REAR** 45.1 cu. ft.	
	COMB 106.3 cu. ft.	***MAX. CARGO** 85.8 cu. ft.	
EPA MILEAGE EST. (MPG)	**CITY** 15 (14.7)	**HIGHWAY** 21	**COMBINED** 17

NOT DESIGNED FOR HIGH SPEED OR PURSUIT DRIVING

Ford Expedition

2WD

TEST VEHICLE DESCRIPTION

MAKE Ford	**MODEL** Expedition 2WD	**SALES CODE NO.** U15	
ENGINE DISPLACEMENT	**CUBIC INCHES** 330	**LITERS** 5.4 3V	
FUEL SYSTEM	Sequential Multiport Fuel Injection	**EXHAUST** Single	
HORSEPOWER (SAENET)	300 @ 5000 RPM	**ALTERNATOR** 130 amp.	
TORQUE	365 ft-lbs @ 3750 RPM	**BATTERY** 650 CCA	
COMPRESSION RATIO	9.8:1		
TRANSMISSION	**MODEL** 4R70W	**TYPE** 4-Speed Auto OD	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	3.73		
STEERING	Variable assist power rack and pinion		
TURNING CIRCLE (CURB TO CURB)	38.7 ft.		
TIRE SIZE, LOAD & SPEED RATING	P265/70/R17 Continental Contitrac TR		
SUSPENSION TYPE (FRONT)	Double wishbone SLA coil-over-shock, gas filled		
SUSPENSION TYPE (REAR)	IRS, double wishbone SLA coil-over-shock, gas filled		
GROUND CLEARANCE, MINIMUM	8.9 in.	**LOCATION** Rear differential	
BRAKE SYSTEM	Power disc w/ 4-wheel ABS		
BRAKES, FRONT	**TYPE** Disc	**SWEPT AREA** 250.0 sq. in.	
BRAKES, REAR	**TYPE** Disc	**SWEPT AREA** 232.0 sq. in.	
FUEL CAPACITY	**GALLONS** 28.0	**LITERS** 106.0	
GENERAL MEASUREMENTS	**WHEELBASE** 119.0 in.	**LENGTH** 205.8 in.	
	TEST WEIGHT 5291	**HEIGHT** 77.4 in.	
HEADROOM	**FRONT** 39.7 in.	**REAR** 39.8 in.	
LEGROOM	**FRONT** 41.2 in.	**REAR** 38.7 in.	
SHOULDER ROOM	**FRONT** 63.4 in.	**REAR** 64.3 in.	
HIPROOM	**FRONT** 63.0 in.	**REAR** 62.4 in.	
INTERIOR VOLUME ***MAX. CARGO IS W/REAR SEATS FOLDED DOWN**	**FRONT** 60.0 cu. ft.	**REAR** 49.6 cu. ft.	
	COMB 109.6 cu. ft.	***MAX. CARGO** 110.5 cu. ft.	
EPA MILEAGE EST. (MPG)	**CITY** 14 (13.8)	**HIGHWAY** 19	**COMBINED** 16

NOT DESIGNED FOR HIGH SPEED OR PURSUIT DRIVING

Dodge Magnum 3.5L

TEST VEHICLE DESCRIPTION

MAKE Dodge	**MODEL** Magnum		**SALES CODE NO.** 26G		
ENGINE DISPLACEMENT	**CUBIC INCHES** 214		**LITERS** 3.5		
FUEL SYSTEM	Sequential Port Fuel Injection		**EXHAUST** Single		
HORSEPOWER (SAENET)	250 @ 6400		**ALTERNATOR** 160 amp.		
TORQUE	250 lbs-ft @ 3800		**BATTERY** 730 CCA		
COMPRESSION RATIO	10.0:1				
TRANSMISSION	**MODEL** 42RLE	**TYPE** 4 Speed Electronic Automatic			
	LOCKUP TORQUE CONVERTER? Yes				
	OVERDRIVE? Yes				
AXLE RATIO	3.64:1				
STEERING	Power Rack & Pinion				
TURNING CIRCLE (CURB TO CURB)	38.9				
TIRE SIZE, LOAD & SPEED RATING	P215/65/R17 98T Goodyear Integrity				
SUSPENSION TYPE (FRONT)	Independent High Arm SLA with Dual Ball Joint Lower, Coil Spring, Sway Bar				
SUSPENSION TYPE (REAR)	Independent Multi-Link, Coil Spring, Sway Bar				
GROUND CLEARANCE, MINIMUM	5.2 in.	**LOCATION** Fascia Belly Pan			
BRAKE SYSTEM	Power, Single Piston Front/Single Piston Rear, Anti-Lock				
BRAKES, FRONT	**TYPE** Vented Disc		**SWEPT AREA** 264 sq. in.		
BRAKES, REAR	**TYPE** Solid Disc		**SWEPT AREA** 218 sq. in.		
FUEL CAPACITY	**GALLONS** 18		**LITERS** 68		
GENERAL MEASUREMENTS	**WHEELBASE** 120 in.		**LENGTH** 197.7 in.		
	TEST WEIGHT 3925		**HEIGHT** 58.3 in.		
HEADROOM	**FRONT** 38.7 in.		**REAR** 38.1 in.		
LEGROOM	**FRONT** 41.8 in.		**REAR** 40.2 in.		
SHOULDER ROOM	**FRONT** 58.7 in.		**REAR** 57.6 in.		
HIPROOM	**FRONT** 56.2 in.		**REAR** 56.1 in.		
INTERIOR VOLUME	**FRONT** 55.0 cu. ft.		**REAR** 51.0 cu. ft.		
	COMB 106.0 cu. ft.		**TRUNK** 27.3 cu. ft.		
EPA MILEAGE EST. (MPG)	**CITY** 19 (18.8)	**HIGHWAY** 27	**COMBINED** 22		

TEST VEHICLE DESCRIPTION SUMMARY

	Chevrolet 4WD Tahoe	Ford Expedition
ENGINE DISPLACEMENT – CU. IN.	327	330
ENGINE DISPLACEMENT – LITERS	5.3*	5.4
ENGINE FUEL SYSTEM	SPFI	SMPFI
HORSEPOWER (SAE NET)	285	300
TORQUE (FT. LBS.)	325	365
COMPRESSION RATIO	9.5:1	9.8:1
AXLE RATIO	3.42	3.73
TURNING CIRCLE – FT. CURB TO CURB	38.3	38.7
TRANSMISSION	4 Speed auto	4 Speed auto
TRANSMISSION MODEL NUMBER	4L60E	4R70W
LOCKUP TORQUE CONVERTER	Yes	Yes
TRANSMISSION OVERDRIVE	Yes	Yes
TIRE SIZE	LT245/75R	P265/70R
WHEEL RIM SIZE – INCHES	16	17
GROUND CLEARANCE – INCHES	10.7	8.9
BRAKE SYSTEM	Power, ABS	Power, ABS
BRAKES – FRONT TYPE	Disc	Disc
BRAKES – REAR TYPE	Disc	Disc
FUEL CAPACITY – GALLONS	26	28
FUEL CAPACITY – LITERS	98.4	106
OVERALL LENGTH – INCHES	198.9	205.8
OVERALL HEIGHT – INCHES	76.3	77.4
TEST WEIGHT – LBS.	5329	5291
WHEELBASE – INCHES	116	119
HEADROOM FRONT – INCHES	40.7	39.7
HEADROOM REAR – INCHES	39.4	39.8
LEGROOM FRONT – INCHES	41.3	41.2
LEGROOM REAR – INCHES	38.6	38.7
SHOULDER ROOM FRONT – INCHES	65.2	63.4
SHOULDER ROOM REAR – INCHES	65.1	64.3
HIPROOM FRONT – INCHES	61.4	63.0
HIPROOM REAR – INCHES	61.3	62.4
INTERIOR VOLUME FRONT – CU. FT.	94.3	60.0
INTERIOR VOLUME REAR – CU. FT.	57.3	49.6
INTERIOR VOLUME COMB. – CU. FT.	151.6	109.6
REAR MAXIMUM CARGO – CU. FT.	168.2	110.5
EPA MILEAGE – CITY – MPG	14	14
EPA MILEAGE – HIGHWAY – MPG	19	19
EPA MILEAGE – COMBINED – MPG	16	16

***4.8L is standard**

TEST VEHICLE DESCRIPTION SUMMARY

	Ford Explorer	Dodge Magnum
ENGINE DISPLACEMENT – CU. IN.	281	214
ENGINE DISPLACEMENT – LITERS	4.6	3.5
ENGINE FUEL SYSTEM	SPFI	SPFI
HORSEPOWER (SAE NET)	292	250
TORQUE (FT. LBS.)	300	250
COMPRESSION RATIO	9.3:1	10.1:1
AXLE RATIO	3.55	3.64:1
TURNING CIRCLE – FT. CURB TO CURB	36.75	38.9
TRANSMISSION	6 Speed Auto	4-Speed Automatic
TRANSMISSION MODEL NUMBER	5R55	42RLE
LOCKUP TORQUE CONVERTER	Yes	Yes
TRANSMISSION OVERDRIVE	Yes	Yes
TIRE SIZE	P235/65R	P215/65R
WHEEL RIM SIZE – INCHES	16	17
GROUND CLEARANCE – INCHES	8.5	5.2
BRAKE SYSTEM	Power, ABS	Power, ABS
BRAKES – FRONT TYPE	Disc	Vented disc
BRAKES – REAR TYPE	Disc	Solid disc
FUEL CAPACITY – GALLONS	22.5	18
FUEL CAPACITY – LITERS	85.1	68
OVERALL LENGTH – INCHES	193.4	197.7
OVERALL HEIGHT – INCHES	72.2	58.3
TEST WEIGHT – LBS.	4873	3925
WHEELBASE – INCHES	113.7	120
HEADROOM FRONT – INCHES	39.8	38.7
HEADROOM REAR – INCHES	38.7	38.1
LEGROOM FRONT – INCHES	42.4	41.8
LEGROOM REAR – INCHES	36.9	40.2
SHOULDER ROOM FRONT – INCHES	59.0	58.7
SHOULDER ROOM REAR – INCHES	59.0	57.6
HIPROOM FRONT – INCHES	55.4	56.2
HIPROOM REAR – INCHES	55.5	56.1
INTERIOR VOLUME FRONT – CU. FT.	Passenger Volume 57.6	55.0
INTERIOR VOLUME REAR – CU. FT.	Passenger Volume 45.1	51.0
INTERIOR VOLUME COMB. – CU. FT.	Combined Passenger Volume 106.3	106.0
REAR MAXIMUM CARGO – CU. FT.	85.8	27.3*
EPA MILEAGE – CITY – MPG	15	19
EPA MILEAGE – HIGHWAY – MPG	21	27
EPA MILEAGE – COMBINED – MPG	17	22

***Cargo area**

SUMMARY OF ACCELERATION AND TOP SPEED

ACCELERATION*		Chevrolet Tahoe 4WD 5.3L SPFI	Ford Explorer 2WD 4.6L SMFI	Ford Expedition 2WD 5.4L SMFI	Dodge Magnum 3.5L SPFI
0 – 20 mph	(sec.)	2.17	1.94	1.96	2.01
0 – 30 mph	(sec.)	3.58	3.09	3.41	3.40
0 – 40 mph	(sec.)	4.96	4.77	4.90	4.89
0 – 50 mph	(sec.)	6.89	6.55	7.18	6.73
0 – 60 mph	(sec.)	9.50	8.62	9.77	9.07
0 – 70 mph	(sec.)	12.23	11.65	12.66	11.79
0 – 80 mph	(sec.)	15.46	14.75	16.68	14.91
0 – 90 mph	(sec.)	22.16	18.63	22.48	19.43
0 – 100 mph	(sec.)				24.71
TOP SPEED	**(mph)**	98	97	100	117
QUARTER MILE					
Time	(sec.)	17.18	16.75	17.32	16.93
Speed	(miles)	82.73	85.58	81.28	84.58

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 8:41 a.m. **TEMPERATURE:** 59.8 °F

MAKE & MODEL: Ford Explorer 4.6L 2WD **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	61.0 mph	153.0 feet	26.16 ft/s^2
Stop #2	60.1 mph	148.8 feet	26.14 ft/s^2
Stop #3	61.0 mph	153.3 feet	26.14 ft/s^2
Stop #4	61.2 mph	154.4 feet	26.05 ft/s^2
Stop #5	60.0 mph	152.9 feet	25.34 ft/s^2
Stop #6	59.5 mph	149.5 feet	25.51 ft/s^2

AVERAGE DECELERATION RATE 25.89 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	61.4 mph	159.6 feet	25.39 ft/s^2
Stop #2	59.5 mph	140.8 feet	27.02 ft/s^2
Stop #3	60.5 mph	156.4 feet	25.20 ft/s^2
Stop #4	61.1 mph	154.3 feet	25.98 ft/s^2
Stop #5	59.5 mph	152.4 feet	24.96 ft/s^2
Stop #6	60.4 mph	150.8 feet	26.03 ft/s^2

AVERAGE DECELERATION RATE 25.76 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 25.83 ft/s^2

Projected Stopping Distance from 60.0 mph 149.9

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 9:09 a.m. **TEMPERATURE:** 60.1°F

MAKE & MODEL: Ford Expedition 5.4L 2WD **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2])
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	62.6 mph	156.8 feet	26.90 ft/s^2
Stop #2	59.7 mph	139.6 feet	27.48 ft/s^2
Stop #3	59.9 mph	144.3 feet	26.77 ft/s^2
Stop #4	59.1 mph	138.3 feet	27.12 ft/s^2
Stop #5	59.7 mph	141.7 feet	27.08 ft/s^2
Stop #6	60.5 mph	140.7 feet	27.99 ft/s^2

AVERAGE DECELERATION RATE 27.22 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2])
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.8 mph	138.2 feet	27.79 ft/s^2
Stop #2	60.8 mph	148.0 feet	26.89 ft/s^2
Stop #3	59.5 mph	140.0 feet	27.17 ft/s^2
Stop #4	58.9 mph	139.7 feet	26.67 ft/s^2
Stop #5	59.9 mph	142.3 feet	27.15 ft/s^2
Stop #6	59.7 mph	146.4 feet	26.22 ft/s^2

AVERAGE DECELERATION RATE 26.98 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 27.10 ft/s^2

Projected Stopping Distance from 60.0 mph 142.9

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 2:27 p.m. **TEMPERATURE:** 66.8 ºF

MAKE & MODEL: Chevrolet Tahoe 5.3L 4WD **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.2 mph	149.9 feet	25.99 ft/s^2
Stop #2	60.1 mph	156.0 feet	24.92 ft/s^2
Stop #3	60.3 mph	159.7 feet	24.47 ft/s^2
Stop #4	60.1 mph	157.1 feet	24.75 ft/s^2
Stop #5	60.0 mph	155.6 feet	24.87 ft/s^2
Stop #6	60.0 mph	154.4 feet	25.07 ft/s^2

AVERAGE DECELERATION RATE 25.01 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.1 mph	154.0 feet	25.26 ft/s^2
Stop #2	60.0 mph	156.6 feet	24.73 ft/s^2
Stop #3	59.7 mph	160.7 feet	23.87 ft/s^2
Stop #4	60.0 mph	159.5 feet	24.24 ft/s^2
Stop #5	60.0 mph	159.3 feet	24.32 ft/s^2
Stop #6	60.2 mph	155.9 feet	25.01 ft/s^2

AVERAGE DECELERATION RATE 24.57 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 24.79 ft/s^2

Projected Stopping Distance from 60.0 mph 156.2

BRAKE TESTING

TEST LOCATION: DaimlerChrysler Proving Grounds **DATE:** September 17, 2005

BEGINNING Time: 7:51 a.m. **TEMPERATURE:** 59.0 °F

MAKE & MODEL: Dodge Magnum 3.5L **BRAKE SYSTEM:** Anti-lock

Phase I

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	59.9 mph	139.2 feet	27.72 ft/s^2
Stop #2	59.6 mph	139.7 feet	27.34 ft/s^2
Stop #3	60.8 mph	146.1 feet	27.22 ft/s^2
Stop #4	60.7 mph	152.2 feet	26.06 ft/s^2
Stop #5	60.7 mph	147.3 feet	26.86 ft/s^2
Stop #6	59.4 mph	140.5 feet	27.04 ft/s^2

AVERAGE DECELERATION RATE 27.04 ft/s^2

HEAT SOAK (4 minutes)

Phase II

BRAKE HEAT-UP: (Two 90 –0 mph decelerations @ 22 ft.sec.[2)]
TEST: (Six 60 – mph impending skid (ABS) maximum deceleration rate stops)

	Initial Velocity	Stopping Distance	Deceleration Rate
Stop #1	60.5 mph	145.3 feet	27.13 ft/s^2
Stop #2	59.1 mph	132.6 feet	28.31 ft/s^2
Stop #3	59.5 mph	138.3 feet	27.57 ft/s^2
Stop #4	61.4 mph	147.4 feet	27.46 ft/s^2
Stop #5	60.3 mph	147.7 feet	26.51 ft/s^2
Stop #6	60.8 mph	152.5 feet	26.07 ft/s^2

AVERAGE DECELERATION RATE 27.18 ft/s^2

Phase III

	Yes/No
Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

OVERALL AVERAGE DECEL. RATE: 27.11 ft/s^2

Projected Stopping Distance from 60.0 mph 142.8

ERGONOMICS AND COMMUNICATIONS

ERGONOMICS	Ford Explorer	Ford Expedition	Chevrolet Tahoe 4WD	Dodge Magnum
FRONT SEAT				
Padding	7.30	7.50	7.90	6.30
Depth of Bucket Seat	6.70	6.90	7.20	6.40
Adjustability – Front to Rear	6.30	6.80	7.00	8.50
Upholstery	8.10	6.80	7.60	6.50
Bucket Seat Design	6.90	6.40	8.30	6.30
Headroom	6.20	8.80	9.20	8.40
Seatbelts	6.40	7.30	6.10	6.30
Ease of Entry and Exit	6.20	7.70	7.90	7.40
Overall Comfort Rating	7.20	7.50	8.30	7.60
REAR SEAT				0.00
Leg room – Front seat back	3.70	8.30	7.50	7.00
Ease of Entry and Exit	4.20	7.00	6.30	6.50
INSTRUMENTATION				
Clarity	7.20	6.30	8.00	6.90
Placement	7.20	6.70	7.80	6.30
VEHICLE CONTROLS				
Pedals, Size and Position	7.30	7.00	7.89	7.40
Power Window Switch	7.90	7.80	7.67	7.10
Inside Door Lock Switch	4.80	7.00	6.67	7.80
Automatic Door Lock Switch	7.50	7.50	8.33	4.90
Outside Mirror Controls	6.30	6.70	8.00	6.40
Steering Wheel, Size, Tilt Release, and Surface	6.40	6.50	7.89	6.70
Heat/AC Vent Placement and Adjustability	6.30	8.00	7.33	6.70
VISIBILITY				
Front (Windshield)	7.50	8.30	7.44	6.60
Rear (Back Window)	5.70	6.90	6.22	4.40
Left Rear Quarter	5.80	5.70	5.11	5.20
Right Rear Quarter	5.50	6.00	5.22	5.20
Outside Rear View Mirrors	6.50	8.20	7.89	6.30
COMMUNICATIONS				
Dashboard Accessibility	5.50	7.50	8.63	5.67
Trunk Accessibility	4.17	8.17	9.33	5.33
Engine Compartment	6.50	7.25	8.75	7.00
TOTAL SCORES	**177.27**	**202.52**	**211.48**	**183.10**

About the National Institute of Justice

NIJ is the research, development, and evaluation agency of the U.S. Department of Justice. The Institute provides objective, independent, evidence-based knowledge and tools to enhance the administration of justice and public safety. NIJ's principal authorities are derived from the Omnibus Crime Control and Safe Streets Act of 1968, as amended (see 42 USC §§ 3721–3723).

The NIJ Director is appointed by the President and confirmed by the Senate. The Director establishes the Institute's objectives, guided by the priorities of the Office of Justice Programs, the U.S. Department of Justice, and the needs of the field. The Institute actively solicits the views of criminal justice and other professionals and researchers to inform its search for the knowledge and tools to guide policy and practice.

Strategic Goals

NIJ has seven strategic goals grouped into three categories:

A. **Creating relevant knowledge and tools**

1. Partner with State and local practitioners and policymakers to identify social science research and technology needs.

2. Create scientific, relevant, and reliable knowledge—with a particular emphasis on terrorism, violent crime, drugs and crime, cost-effectiveness, and community-based efforts—to enhance the administration of justice and public safety.

3. Develop affordable and effective tools and technologies to enhance the administration of justice and public safety.

B. **Dissemination**

4. Disseminate relevant knowledge and information to practitioners and policymakers in an understandable, timely, and concise manner.

5. -Act as an honest broker to identify the information, tools, and technologies that respond to the needs of stakeholders.

C **Agency management**

6. Practice fairness and openness in the research and development process.

7. Ensure professionalism, excellence, accountability, cost-effectiveness, and integrity in the management and conduct of NIJ activities and programs.

Program Areas

In addressing these strategic challenges, the Institute is involved in the following program areas: crime control and prevention, including policing; drugs and crime; justice systems and offender behavior, including corrections; violence and victimization; communications and information technologies; critical incident response; investigative and forensic sciences, including DNA; less-than-lethal technologies; officer protection; education and training technologies; testing and standards; technology assistance to law enforcement and corrections agencies; field testing of promising programs; and international crime control.

In addition to sponsoring research and development and technology assistance, NIJ evaluates programs, policies, and technologies. NIJ communicates its research and evaluation findings through conferences and print and electronic media.

About the Law Enforcement and Corrections Standards and Testing Program

The Law Enforcement and Corrections Standards and Testing Program is sponsored by the Office of Science and Technology of the National Institute of Justice (NIJ), U.S. Department of Justice. The program responds to the mandate of the Justice System Improvement Act of 1979, which directed NIJ to encourage research and development to improve the criminal justice system and to disseminate the results to Federal, State, and local agencies.

The Law Enforcement and Corrections Standards and Testing Program is an applied research effort that determines the technological needs of justice system agencies, sets minimum performance standards for specific devices, tests commercially available equipment against those standards, and disseminates the standards and the test results to criminal justice agencies nationwide and internationally.

The program operates through the following:

- The **Law Enforcement and Corrections Technology Advisory Council** (LECTAC), consisting of nationally recognized criminal justice practitioners from Federal, State, and local agencies, assesses technological needs and sets priorities for research programs and items to be evaluated and tested.

- The **Office of Law Enforcement Standards** (OLES) at the National Institute of Standards and Technology develops voluntary national performance standards for compliance testing to ensure that individual items of equipment are suitable for use by criminal justice agencies. The equipment standards developed by OLES are based on laboratory evaluation of commercially available products in order to devise precise test methods that can be universally applied by any qualified testing laboratory and to establish minimum performance requirements for each attribute of a piece of equipment that is essential to how it functions. OLES-developed standards can serve as design criteria for manufacturers or as the basis for equipment evaluation. The application of the standards, which are highly technical in nature, is augmented through the publication of equipment performance reports and user guides. Individual jurisdictions may use the standards in their own laboratories to test equipment, have equipment tested on their behalf using the standards, or cite the standards in procurement specifications.

- The **National Law Enforcement and Corrections Technology Center** (NLECTC), operated by a grantee, supervises a national compliance testing program conducted by independent laboratories. The standards developed by OLES serve as performance benchmarks against which commercial equipment is measured. The facilities, personnel, and testing capabilities of the independent laboratories are evaluated by OLES prior to testing each item of equipment. In addition, OLES helps NLECTC staff review and analyze data. Test results are published in consumer product reports designed to help justice system procurement officials make informed purchasing decisions.

Publications are available at no charge through NLECTC. Some documents are also available online through the Justice Technology Information Network (JUSTNET), the center's Internet/World Wide Web site. To request a document or additional information, call 800–248–2742 or 301–519–5060, or write:

National Law Enforcement and Corrections Technology Center

2277 Research Boulevard
Mail Stop 8J
Rockville, MD 20850
E-mail: *asknlectc@nlectc.org*
World Wide Web address: *http://www.justnet.org*

About the National Law Enforcement and Corrections Technology Center System

The National Law Enforcement and Corrections Technology Center (NLECTC) system exists to support the Nation's structure of State and local law enforcement and corrections. The United States has more than 18,000 law enforcement agencies, 50 State correctional systems, and thousands of prisons and jails. The fragmented nature of law enforcement and corrections impedes the dissemination of valuable new information, fosters a patchwork marketplace that discourages the commercialization of new technologies, and underscores the need for uniform performance standards for equipment and technologies.

The National Institute of Justice's (NIJ's) Office of Science and Technology (OS&T) created NLECTC in 1994 as a national system of technology centers that are clearinghouses of information and sources of technology assistance and that also attend to special needs, including technology commercialization and standards development.

The NLECTC system's purpose is to determine the needs of the law enforcement and corrections communities and assist them in understanding, using, and benefitting from new and existing technologies that, increasingly, are vital levers of progress in criminal justice. NIJ/OS&T and the NLECTC system are the only current programs developed by the Federal Government that focus solely on the development and transfer of technologies to State and local law enforcement and corrections.

NLECTC is a program of NIJ, the research and development arm of the U.S. Department of Justice. The system currently consists of a national center, five regional centers, and several speciality offices. Also contributing to the initiatives of the center system is the Office of Law Enforcement Standards. The centers are co-located with a host organization or agency that specializes in one or more areas of technology research and development.

The National Center, located in Rockville, Maryland, is the system's information hub. Regional centers are currently located in Alaska, California, Colorado, New York, and South Carolina. Speciality centers located around the country deal with border matters (California), commercialization of law enforcement and corrections technologies (West Virginia), rural law enforcement issues (Kentucky), and standards and testing (Maryland).

Each center shares roles with the other centers and has distinctive characteristics. All are focused on helping law enforcement and corrections take full advantage of technology's rapidly growing capacity to serve the purposes of crime control and the criminal justice system.

A national body of criminal justice professionals, the Law Enforcement and Corrections Technology Advisory Council (LECTAC), helps identify research and development priorities, thereby influencing the work of the NLECTC system. In addition, each NLECTC center has a regional advisory council of law enforcement and corrections officials. Together, LECTAC and the advisory councils help to keep the NLECTC system attentive to technological priorities and the needs of law enforcement and corrections. They help to link the end user with the developer to create technologies that adequately meet operational requirements and establish which potential technologies should be pursued for development.

All of the current regional centers have distinctive roles or focus areas, that, in many cases, are aligned with the expertise of host organizations and agencies. The centers are currently operated under cooperative agreements or interagency agreements with host organizations and agencies whose employees staff the centers.

To receive more information or to add your name to the NLECTC mailing list, call 800–248–2742 or 301–519–5060, or write:

National Law Enforcement and Corrections Technology Center
2277 Research Boulevard
Mail Stop 8J
Rockville, MD 20850
E-mail: *asknlectc@nlectc.org*
World Wide Web address: *http://www.justnet.org*

The following is a list of NLECTC regional and affiliated facilities that assist NIJ in fulfilling its mission.

NLECTC–Northeast
26 Electronic Parkway
Rome, NY 13441–4514
(p) 888–338–0584
(f) 315–330–4315
E-mail: *nlectc_ne@rl.af.mil*

NLECTC–Southeast
5300 International Boulevard
North Charleston, SC 29418
(p) 800–292–4385
(f) 843–760–4611
E-mail: *nlectc-se@nlectc-se.org*

NLECTC–Rocky Mountain
2050 East Iliff Avenue
Denver, CO 80208
(p) 800–416–8086
(f) 303–871–2500
E-mail: *nlectc@du.edu*

NLECTC–West
c/o The Aerospace Corporation
2350 East El Segundo Boulevard
El Segundo, CA 90245–4691
(p) 888–548–1618
(f) 310–336–2227
E-mail: *nlectc@law-west.org*

NLECTC–Northwest
3000 C Street
Suite 304
Anchorage, AK 99503–3975
(p) 866–569–2969
(f) 907–569–6939
E-mail: *nlectc_nw@ctsc.net*

Border Research and Technology Center
1010 Second Avenue
Suite 1920
San Diego, CA 92101–4912
(p) 888–656–2782
(f) 888–660–2782
E-mail: *info@brtc.nlectc.org*

Rural Law Enforcement Technology Center
101 Bulldog Lane
Hazard, KY 41701
(p) 866–787–2553
(f) 606–436–6758
E-mail: *ruletc@aol.com*

Office of Law Enforcement Technology Commercialization
2001 Main Street
Suite 500
Wheeling, WV 26003
(p) 888–306–5382
(f) 304–230–2310
E-mail: *oletc@oletc.org*

Office of Law Enforcement Standards
100 Bureau Drive
Stop 8102
Gaithersburg, MD 20899–8102
(p) 301–975–2757
(f) 301–948–0978
E-mail: *oles@nist.gov*

About the Office of Law Enforcement Standards

The Office of Law Enforcement Standards (OLES) was established as a matrix management organization in 1971 through a Memorandum of Understanding between the U.S. Departments of Justice and Commerce based on the recommendations of the President's Commission on Crime. OLES's mission is to apply science and technology to the needs of the criminal justice community, including law enforcement, corrections, forensic science, and the fire service. While its major objective is to develop minimum performance standards, which are promulgated as voluntary national standards, OLES also undertakes studies leading to the publication of technical reports and user guides.

The areas of research investigated by OLES include clothing, communication systems, emergency equipment, investigative aids, protective equipment, security systems, vehicles, weapons, and analytical techniques and standard reference materials used by the forensic science community. The composition of OLES's projects varies depending on priorities of the criminal justice community at any given time and, as necessary, draws on the resources of the National Institute of Standards and Technology.

OLES assists law enforcement and criminal justice agencies in acquiring, on a cost-effective basis, the high-quality resources they need to do their jobs. To accomplish this, OLES:

- Develops methods for testing equipment performance and examining evidentiary materials.
- Develops standards for equipment and operating procedures.
- Develops standard reference materials.
- Performs other scientific and engineering research as required.

Since the program began in 1971, OLES has coordinated the development of nearly 200 standards, user guides, and advisory reports. Topics range from performance parameters of police patrol vehicles, to performance reports on various speed-measuring devices, to soft body armor testing, to analytical procedures for developing DNA profiles.

The application of technology to enhance the efficiency and effectiveness of the criminal justice community continues to increase. The proper adoption of the products resulting from emerging technologies and the assessment of equipment performance, systems, methodologies, etc., used by criminal justice practitioners constitute critical issues having safety and legal ramifications. The consequences of inadequate equipment performance or inadequate test methods can range from inconvenient to catastrophic. In addition, these deficiencies can adversely affect the general population when they increase public safety costs, preclude arrest, or result in evidence found to be inadmissible in court.